APPENDIX D: SAMPLE COLLECTION FIELD DATA SHEETS

Appendix D1: Adult Fish Sample Data Sheets (Phase I and Phase II)

Appendix D2: Young-of-the-Year Fish Sample Collection Data Sheets (Phase II)

Appendix D3: Lake Profiling and Surface Water Collection Data Sheets (Phase I Stratification and Overturn and Phase II Stratification)

Appendix D4: Sediment and Sediment Pore Water Collection Data Sheets (Phase II)

Appendix D5: Aquatic Vegetation Field Data Sheets (Phase I)

Appendix D6: Aquatic Invertebrates Field Data Sheets (Phase I)

APPENDIX D: SAMPLE COLLECTION FIELD DATA SHEETS

Appendix D1: Adult Fish Sample Data Sheets (Phase I and Phase II)

PHASE I

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: Coods Inlet (CI) Pg1 **Date:** 10/4/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC1711301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
KPG 001 S1	LMB		402mm / 950gm	F ovary 7.8gm
002 S1	LMB		350 / 575	
003 S2	LMB		291 / 325	
KP7 004 S2	LMB		323 / 425	
005 S2	LMB		295 / 250	
KP8 006 S1	Bluegill		152 / 69.7	
007 S1	Bluegill		159 / 74.1	

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: Woods E Pg 2 **Date:** 10/4/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

KPS

KPQ

Fish #	Genus	Species	Length (mm)	Comments
S1 001 008	Bluegill		135 / 45.5	
S1 002 009	Bluegill		138 / 41.1	
S2 003 010	Bluegill		188 / 118.5	
S2 004 011	Bluegill		166 / 99.2	
S2 005 012	Bluegill		168 / 90.0	
006	go to			
007	Pg 3			

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: Cords Trib pg 3 **Date:** 10/7/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC171301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001 013	CH Catfish		650/3348	M
002				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: CURDS INLET pg 4 **Date:** 10-13-17

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
~~001~~ 014	FLATHEAD CATFISH		588mm / 2342g	OVARY 15.6g F
~~002~~ 015	FLATHEAD		508mm / 1277g	
~~003~~ 016	CHANNEL CATFISH		508mm / 1600g	
~~004~~ 017	CHANNEL		480mm / 950g	M
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: ~~HRt~~ → Curds Fidet **Date:** 10/3

Stream / Location: OPTION **Time:**

KPDES Permit#:

County: **Lat/Long Upstream Reach:**

Lat/Long Downstream Reach:

Outfall #: **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

removed large ovaries fish forgot

Fish #	Genus	Species	Length (mm)	Comments
001 St	Kentucky Bass		13.5" 346	560 w F ovaries stored
002	LMB		347	500 M
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish:
Total # Fish Collected in Sample:

Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: HQ1 **Date:** 10/4/1

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC/F11301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)		Comments
001	Bluegill		132	36.8	♂
002	Bluegill		132	26.1	
003	Bluegill		123	29.5	
004	Bluegill		119	26.5	
005	Bluegill		115	22.6	
006	Bluegill		107	19.7	
007			118	26.1	

P3 S1 P4 S2

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL#1 **Date:** 10/5 & 10/6

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC1719301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm) / g	Comments
001	CH catfish		538 / 1575	M
002	LMB		372 / 825	F ovary = 4.1 gm
003	LMB		392 / 850	
004 10/6	LMB		380 / 825	
005 10/6	LMB		346 / 625	
~~006~~				
~~007~~				

S1

S2

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: DWR / DES	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL1 **Date:** Oct 11, 2017

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

	Fish #	Genus	Species	Length (mm)	Comments
Sample 1	~~001~~ 006	Blue gill		83.7g 175mm	
	~~002~~ 007	Blue gill		56.2g 150mm	
	~~003~~ 008	Blue gill		72.4g 165mm	
Sample 2	~~004~~ 009	Blue gill		40.4g 139mm	
	~~005~~ 010	Blue gill		59.2g 154mm	
	006 011	Blue gill		40.6g 135mm	
	007 012	Blue gill		44.9g 145mm	

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: LHL 1 **Date:** Oct 11, 2017

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
~~001~~ 013	FHC		775g 456mm	
002				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL2 pg 3 **Date:** 10/5

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC1711301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001 015	LMB		345/650	M
SL 002 016	LMB		325/425	M
003 017	LMB		332/450	M
004 018	LMB		306/400	M
SL 005 019	LMB		290/325	M
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LH12 rg 2 **Date:** 10/5/18

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC1711301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
52 001 008	Bluegill		127 / 31.1	
002 009	FH Catfish		415 / 650	Male
003 010	Clt Catfish		493 / 1150	Male
004 011	KY Bass		301 / 425	
51 005 012	KY Bass		302 / 350	
006 013	KY Bass		321 / 500	Fovery 4.0gm
007 014	KY Bass		352 / 650	

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL#2 PS1 **Date:** 10/5/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC171301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001	Bluegill		135 / 39.4	
002 S1	Bluegill		145 / 47.1	
003	Bluegill		160 / 74.8	
004	Bluegill		134 / 30.5	
005 S2	Bluegill		125 / 25.8	
006	Bluegill		128 / 25.9	
007	Bluegill		122 / 24.9	

Lose next Pg

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL#3 PS1 **Date:** 10/5/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC1711391

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001 S1	Hybrid Striper		533	2130 F
002 S1	Hybrid Striper		541	2130 F ovary = 26.2g
003 S2	Hybrid Striper		416	2130 ~~F~~ M
004 S1	Kentucky		330	537 F ovary 2.1g
005 S1	Kenty		320	450 Not sexed
006 S1	Kentucky	Bass	332	500 M
~~007~~				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL#3 pg 2 **Date:** 10/4/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC1711301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
P1 S2001 007	Kentucky	Bass	353	700gr F olive 4.3cm
S2002 008	Ken	Bas	370	750
S2003 009	Ken	Bas	337	500gr
P2 004 010	Flathead	Catfish	21.5" 550	1700gr F Not submitted DWQ
005				
006				
007				

P1

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL3 PSA3 **Date:** 10/5/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC0711301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Picture on Ricks

Fish #	Genus	Species	Length (mm) / wt	Comments
001	Bluegill		150 / 51.1	
002 S1	Bluegill		160 / 68.2	
003	Bluegill		158 / 65.9	
004	Bluegill		144 / 45.0	
005 S2	Bluegill		135 / 38.7	
006	Bluegill		140 / 37.4	
007	Bluegill		130 / 35.2	

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL #3 ~~4~~ Pg 4 **Date:** 10/5/17

Stream / Location: ______ **Time:** ______

KPDES Permit#: ______

County: ______ **Lat/Long Upstream Reach:** ______

Lat/Long Downstream Reach: ______

Outfall #: ______ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length ~~(mm)~~ or	Comments
S1 ~~001~~ 008	Channel catfish		485 / 800	F No egg – Dosage missing area
~~002~~ 0				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: ______
Total # Fish Collected in Sample: ______

Collected by: ______	Date: ______	Time: ______
Relinquished by: ______	Date: ______	Time: ______
Received by: ______	Date: ______	Time: ______

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: ~~CH~~ LHL3 PS #5 **Date:** 10/6/17

Stream / Location: ______ **Time:** ______

KPDES Permit#: ______

County: ______ **Lat/Long Upstream Reach:** ______

Lat/Long Downstream Reach: ______

Outfall #: ______ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001 S1	CH Catfish		443/775	F mass = 0.44 gr
002				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: ______
Total # Fish Collected in Sample: ______

Collected by: ______	Date: ______	Time: ______
Relinquished by: ______	Date: ______	Time: ______
Received by: ______	Date: ______	Time: ______

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL3 **Date:** 10/18/17

Stream / Location: Herrington Lake **Time:** 1630

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow (normal) other

Fish #	Genus	Species	Length (mm)	LHC Comments
001	Channel Catfish	CC	730mm	5070g, 138.27 Gravid
002				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: CHL #4 Pool **Date:** 10/3/17

Stream / Location: _____ **Time:** 18 47 from last day inventory

KPDES Permit#: SC1711301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001 S1	Lepomis	Macrochirus	186	104gr
002 S1	Bluegill		182	88.8gr
003 S1	Bluegill		178	70.3gr
004 S1	Bluegill		168	45.4gr
005 S2	Bluegill		168	65.0gr
006 S2	Bluegill		159	64.2gr
007 S2	Bluegill		150	53.2

S1

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL #4 PS2 **Date:** 10/3

Stream / Location: _____ **Time:** _____

KPDES Permit#: SC1711301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

cont from PS1

Fish #	Genus	Species	Length (mm) qr	Comments
S2 ~~001~~ 008	Bluegill		148/ 48.4	
S1 ~~002~~ 001	KY Bass		287/300.2	Male
S1 ~~003~~ 002	KY Bass		310/375qr	F ovary = 3qr
S2 ~~004~~ 003	LM Bass		311/400qr	F ovary = 2.7qr
~~005~~ 004 XTRA	KY Bass		258/200.6	
~~006~~ 005 XTR	KY Bass		248/190.5	
~~007~~				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL4 P83 **Date:** 10/4

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

LPS

Fish #	Genus	Species	Length (mm)	Comments
001 S2	LMB		320 400	
002				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL-4 **Date:** Oct 12, 2017

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001	CC		2270g 515mm	
002	FHC		3008g 682mm	
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: LHL#5 P81 **Date:** 10/7/16

Stream / Location: ~~S6~~ **Time:** _____

KPDES Permit#: SC1711501

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm) / gr	Comments
S1 001	CHCF		802 / 4737	Fovary = 82 gr
S1 002	CHCatfish		645 / 2440	
S2 003	CHCF		522 / 1175	
S2 004	CHCF		520 / 1325	
S2 005	CHCF		510 / 1450	
006	Bluegill		172 / 90	
S1 007 cont P84	LMB		377 / 825	Fovary = 6.6 gr

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: LHL #5 / S2 **Date:** 10/7

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
S1 001 008	LMB		392 / 900	
S1 002 009	LMB		410 / 1050	
S2 003 010	LMB		398 / 900	
S3 004 011	LMB		378 / 800	
S4 005 012	LMB		390 / 850	
006				
007				

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL 5 **Date:** Oct 11, 2017

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

	Fish #	Genus	Species	Length (mm)	Comments
sample 1	~~001~~ 013	Bluegill		96.5g 177mm	
	002 014	Bluegill		101.4g 186mm	
	003 015	Bluegill		83.1g 167mm	
sample 2	004 016	Bluegill		56.0g 158mm	
	005 017	Bluegill		55.3g 155mm	
	006 018	Bluegill		50.4g 148mm	
	007 019	Bluegill		55.2g 152mm	

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: LHL6 **Date:** 10/7/17

Stream / Location: _____ **Time:** _____

KPDES Permit#: SCR11301

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001	CH Catfish		710/4625	Forg=118.8
002	CH CF		500/1200	
003	KY Bass		333/475	Forg = 5.0g
004	Hybrid stripe		503/1825	M
005	Hybrid stripe		480/1650	Forg 13.5g
006	Hybrid stripe		495/1800	
007				

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: LHLe **Date:** 10-11-17

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
~~001~~ 007	BLUEGILL		76.6g 171mm	
~~002~~ 008	Bluegill		90.2g 180mm	
003 009	Bluegill		97.0g 173mm	
004 010	Bluegill		55g 148mm	
005 011	Bluegill		65.4g 167mm	
006 012	Bluegill		62.2g 161mm	
007 013	LMB		525g 334mm	

sample 1

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL6 **Date:** 10-11-2017

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
~~001~~ 014	KY Bass		459 329mm	
002 015	KY Bass		575g 325mm	
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL6 **Date:** Oct 2, 2017

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
~~001~~ 016	LMB		1050g 442mm	
002 017	CC		550g 424mm	
~~003~~				
~~004~~				
005				
006				
~~007~~				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: LHL6 **Date:** Oct 13, 2016

Stream / Location: _____ **Time:** _____

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
~~001~~ 018	CC		1925 g 603mm	
002				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: MHL-3 **Date:** Oct 14, 2017

Stream / Location: Herrington Lake **Time:** 1730

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow **normal** other

Fish #	Genus	Species	Length (mm)	Comments
001	Sample 1 of 2	BG	146 mm	48.9g
002		BG	153 mm	57.7g
003		BG	152 mm	62.4g
004		BG	145 mm	47.8g
005	Sample 2 of 2	BG	138 mm	42.0g
006		BG	145 mm	49.3g
007		BG	141 mm	44.1g

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: MHL3 **Date:** 10/14/17
Stream / Location: Herrington Lake **Time:** 1730
KPDES Permit#: _____
County: _____ **Lat/Long Upstream Reach:** _____
Lat/Long Downstream Reach: _____
Outfall #: _____ **Duplicate/Replicate (circle one): yes no**
Flow status (circle one): runoff event high flow low flow (normal) other

Fish #	Genus	Species	Length (mm)	wt (g) Comments
0018	Sample 1 of 2	CC	505mm	1150g, ovary= 26.1g
0019		CC	540mm	1250g
0010	Sample 2 of 2	CC	454mm	775g
0011		CC	474mm	875g
0012	Sample 1 of 2	LMB	470mm	1550g, ovary= 12.3g
0013		LMB	385mm	900g
0014	Sample 2 of 2	LMB	385mm	900g

1/3

This is correct!

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: MHL3 **Date:** 10/14/19

Stream / Location: Herrington Lake **Time:** 1730

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
0015	Sample	LMB	364 mm	800g
0016	2 of 2 (2/35)	LMB	345mm	600g
0017				
0018				
0019				
0020				
007				

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

~~LL.8~~

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: MHL-1 **Date:** Oct 14th, 2017

Stream / Location: Herrington Lake **Time:** 1630

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus (Sample 1 of 2)	Species	Length (mm)	wt(s) Comments
001	[redacted]	LMB	366mm	750g, male
002	Sample 1 of 1	KYB	334 mm	475g, ovary = 4.26g
003		KYB	350 mm	525g,
004	Sample 1 of 2	FC	511 mm	1350g, ovaries 11.5g
005		FC	460 mm	1300g
006	Sample 2 of 2	FC	620 mm	2865g
007		FC	865 mm	8913g

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: MHL1 **Date:** Oct, 14th, 2017

Stream / Location: Herrington Lake **Time:** 1630

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	wt(g) Comments
001 8	½ of Sample #1 of 2	BG	160 mm	58.5g
002				
003				
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: MHL-1 **Date:** Oct 15th, 2017

Stream / Location: Herrington Lake **Time:** 1200 pm

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow (normal) other

Fish #	Genus	Species	Length (mm)	Comments
0016	Sample 2 of 2	BG	147 mm	51.5 g
0017		BG	147 mm	52.6 g
0018		BG	147 mm	49.1 g
004				
005				
006				
007				

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: MHC-1 **Date:** Oct 15th, 2017

Stream / Location: Herrington Lake **Time:** 1200 pm

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow (normal) other

Fish #	Genus	Species	Length (mm)	Comments
0019	~~Micropterus~~ Sample 1 of 1	LMB	365 mm	625 g
0010	Sample 2 of 2	LMB	347 mm	550 g
0011		LMB	345 mm	525 g
0012		BG	161 mm	55.6 g
0013	Sample 1 of 2	BG	165 mm	73.7 g
0014		BG	172 mm	83.5 g
0015	Sample 2 of 2	BG	152 mm	51.7 g

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

DR1

Station #: Dix River (Below Dam) **Date:** 10-16-17

Stream / Location: _____ **Time:** 1630

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001	Green Sunfish	(GSF)	159 mm,	81.2 g AS
002 Sample 1 of 2	"	(GSF)	132 mm	39.8 g
003	"		119 mm	24.5 g
004	"		105 mm	21.6 g
005 Sample 2 of 2	"		94 mm	14.5 g
006	"		96 mm	14.1 g
007	"		92 mm	12.1 g

(GSF) Sample 1 N = 3 , Sample 2, N = 8

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE
CHAIN-OF-CUSTODY

Station #: DR1 Dix River **Date:** 10-16-17

Stream / Location: G Below Dam **Time:** 1630

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one): yes no**

Flow status (circle one): runoff event high flow low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001 8	Green Sunfish	(GSF)	96 mm	14.2g
002 9 Sample 2 Cont'd	"	"	87 mm	11.9g
003 10	"	"	92 mm	10.3g
004 11	"	"	79 mm	8.0g
005 12 Sample 1 of 1	Bluegill	BG	134 mm	32.5g
006 13	"	"	112 mm	24.8g
007 14	Longear Sunfish	LE	109 mm	26.1g

Length (mm) of 75%tile of Longest Fish: _____
Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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SELENIUM FISH TISSUE CHAIN-OF-CUSTODY

Station #: DR1 **Date:** 10/18/17

Stream / Location: Dix River (Below Dam) **Time:** 1830

KPDES Permit#: _____

County: _____ **Lat/Long Upstream Reach:** _____

Lat/Long Downstream Reach: _____

Outfall #: _____ **Duplicate/Replicate (circle one):** yes no

Flow status (circle one): runoff event (high flow) low flow normal other

Fish #	Genus	Species	Length (mm)	Comments
001 15	Largemouth Bass	LMB	341mm	500g, Ovary = 7.8g
002 16	Brown trout	BT	310mm	252g Ovary = 35.6g Gravid
003 17	Spotted Sucker	SS	256mm	160g
004 18	"	"	207mm	87g
005 19	"	SS	350mm	500g
006 20	Hogsucker	HS	287mm	285g, 9.9Zg
007 21	"	HS	259mm	205g

All males Sample

Length (mm) of 75%tile of Longest Fish: _____

Total # Fish Collected in Sample: _____

Collected by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____
Received by: _____	Date: _____	Time: _____

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RAMBOLL

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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): CI
Fish Sampling Location Description (e.g. Above Dix Dam): Both N+S Southbanks Upper/Mid/Lower	
KDFWR Wildlife Collection Permit#: SC 18 11270	Notes / Observations:
Date: 06/15/2018	
Start Time: 1440 - 2433 shock seconds	
GPS Coordinates 37.78378 84.71177 (or where they can be found if collected electronically):	
Investigators: DLC, DJ, HDT	Weather at Start: Hot, water temp = 30°C

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1064	001	Micropterus	salmoides	138	475	
2064	002	"	"	131	450	
3064	003	"	"	145	675	
4064	004	"	"	160	1050	
1064	005	Lepomis	macrochirus	64	71.2	Regression on left side
2064	006	"	"	57	61.9	
3064	007	"	"	59	46.0	
4064	008	"	"	52	37.9	
	009					
	010					
	011					
	012					
	013					
	014					
	015					

CI EMB #1

CI BG #1

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): CI
Fish Sampling Location Description (e.g. Above Dix Dam): 1st bN, North	
KDFWR Wildlife Collection Permit#:	Notes / Observations:
Date: 6/19/18	
Start Time: 0820	
GPS Coordinates (or where they can be found if collected electronically):	
Investigators:	Weather at Start:

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1of2 2of2 001	001	Pylodictis	olivaris	23.9	2639	Fresh Dead (on ice)
	002	Pylodictis	olivaris	25.3	2923	
002	003	Pylodictis	olivaris	18.2	1175	<75% of previous, but kept as separate sample
	004					
	005					
	006					
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): HQ
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#: SC/81/271 Date: 6/16/18 Start Time: 1314	Notes / Observations: 1314 seconds of shock time
GPS Coordinates 37.778 305 84.71181 (or where they can be found if collected electronically):	
Investigators: [illegible] DJ HDT	Weather at Start: Hot Sunny

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
3064 001	001	Lepomis	macrochirus	7.4	130.5	
4064	002	"	"	6.6	98.7	
	003					
	004					
	005					
	006					
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): HQ1
Fish Sampling Location Description (e.g. Above Dix Dam): HQ1	
KDFWR Wildlife Collection Permit#: SC1811270	Notes / Observations:
Date: 06/15/2018	
Start Time: 1600	
GPS Coordinates (or where they can be found if collected electronically): 37.77682, 84.71273	
Investigators: DWEL, DJ, HDT	Weather at Start: Hot, water temp 80s F

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1 of 2 (HQ BG)	001	Lepomis	macrochirus BG	67	97.1	
2 of 2 (HQ BG)	002	Lepomis	macrochirus	56	42.7	
	003					
	004					
	005					
	006					
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by: [redacted]	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL 1
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#: SC1811271 Date: 6/16/18 Start Time: 1132	Notes / Observations: 2039 seconds shock time Both N & S banks w/ no docks
GPS Coordinates (or where they can be found if collected electronically):	
Investigators: RBL DT HDT	Weather at Start: Sunny Hot

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1053 001	001	Lepomis	macrochirus	7.1	119.8	
BB 2053	002	Lepomis	macrochirus	7.2	122.0	
3053	003	Lepomis	macrochirus	5.5	41.8	
4053	004	Lepomis	macrochirus	6.5	84.0	
1053 001	005	Micropterus	salmoides	13.8	640.0	ovarian ♀
UMB 2053	006	Micropterus	salmoides	13.5	560.0	
3053	007	Micropterus	salmoides	17.7	1330	post spawn tail/~~condition~~ condition
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL 1
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#:	Notes / Observations:
Date: 6/20/18	
Start Time:	
GPS Coordinates (or where they can be found if collected electronically):	
Investigators: PJ, RBC	Weather at Start: Hot, Partially Sunny

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1063 001	001	Pylodictis	olivaris	19.6	1540	
2063	002	Pylodictis	olivaris	20.4	1680	
3063	003	Pylodictis	olivaris	19.3	1350	
1061 002	004	Ictalurus	punctatus	21.7	1540	See pg 3 Data 6/18
	005					
	006					
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

Document ID:
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Effective Date:
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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL1
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#:	Notes / Observations: trot lines fished overnight
Date: 6/18 /18	
Start Time: 905	
GPS Coordinates (or where they can be found if collected electronically):	
Investigators: DEL, DJ	Weather at Start: Sunny Hot

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1061	001	Ictalurus	punctatus	217	1540	Sub Q pimple like parasites, good conch. tic
	002					
	003					
	004	changed to				
	005	FWB002 (CCF)-LHL1				1806/18 1of1
	006					
	007	In photos as		FWB001 (CCF)-LHL1		1806/18
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL 2
Fish Sampling Location Description (e.g. Above Dix Dam): all shaked along NE & SE bank of cove starting Escalock	
KDFWR Wildlife Collection Permit#: SC18/1270 Date: 6/16/18 Start Time: 1041	Notes / Observations: shock time = 899 seconds main channel
GPS Coordinates (or where they can be found if collected electronically): 37 78335 84 70926	
Investigators:	Weather at Start:

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1065 001	001	Lepomis	macrochirus	7.0	11.68	
2065	002	Lepomis	macrochirus	7.0	11.4	
3065	003	Lepomis	macrochirus	6.5	8.2	
4065	004	Lepomis	macrochirus	6.5	8.5	
5065	005	Lepomis	macrochirus	6.2	7.6.6	
1063 001	006	Micropterus	salmonoides	18.0	1258	spent ♀ w/ tail tag
2063	007	Micropterus	salmonoides	14.0	600	
3of3	008	Micropterus	salmonoides	15.5	95.0	
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

Document ID:
Version #
Effective Date:
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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL 2
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#:	Notes / Observations:
Date: 06/20/18	
Start Time:	
GPS Coordinates (or where they can be found if collected electronically):	
Investigators: DJ, RBL	Weather at Start: Hot Partially Sunny

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length ~~(mm)~~ Tmm	Weight (grams)	Comments
1 of 2 001	001	Pylodictis	olivaris	19.1	1280	
2 of 2	002	Pylodictis	olivaris	18.7	1230	
	003					
	004					
	005					
	006					
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

Document ID:
Version #
Effective Date:
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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL3
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#: SC1811271 Date: 6/16/18 Start Time: 1341	Notes / Observations: Smallmouth, made 2 passes 1396 seconds shock time
GPS Coordinates (or where they can be found if collected electronically):	
Investigators: MM DJ HDT	Weather at Start: Sunny Hot

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1062 001	001	Lepomis	macrochirus	58	58.8	
2062 "	002	Lepomis	macrochirus	66	89.8	
	003					
	004					
	005					
	006					
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

Document ID:
Version #
Effective Date:
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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL 6
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#: SC/S/1271 Date: 6/16/18 Start Time: 925 Am	Notes / Observations: Shocked N side of cove to waterfall at lower end all collected in 1431 sec shock time
GPS Coordinates (or where they can be found if collected electronically): 37.76007 84.68973	
Investigators: RBL, DJ, HDT	Weather at Start: Smny Hot

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length ~~(mm)~~	Weight (grams)	Comments
1of5	001	001	Lepomis	macrochirus	7.2	124.6
2of5		002	Lepomis	macrochirus	6.7	94.7
3of5		003	Lepomis	macrochirus	6.8	102.3
4of5		004	Lepomis	macrochirus	6.3	78.8
5of5		005	Lepomis	macrochirus	5.8	55.0
1of3	001	006	Micropterus	salmonoides	14.7	780.0
LMB 2of3	001	007	Micropterus	salmonoides	13.9	700.0
3of3		008	Micropterus	salmonoides	14.5	750.0
		009				
		010				
		011				
		012				
		013				
		014				
		015				

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

Document ID:
Version #
Effective Date:
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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL 6
Fish Sampling Location Description (e.g. Above Dix Dam):	
KDFWR Wildlife Collection Permit#:	Notes / Observations: 1 CCF for 002
Date: 6/20/18	
Start Time:	
GPS Coordinates (or where they can be found if collected electronically):	
Investigators:	Weather at Start:

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length ~~(mm)~~ inch	Weight (grams)	Comments
1064 ovl	001	Pylodictis	olivaris	16.5	720	
2064 /	002	Pylodictis	olivaris	19.3	1175	
3064	003	Pylodictis	olivaris	18.4	960	
4064 001	004	Pylodictis	olivaris	17.4	780	
1062 002	005	Ictalorus	punctatus	21.3	1650	
2062 002	006	Ictalorus	punctatus	17.3	825	was listed as FWB 001 (CCF) - LHL 6 1806 18 in photo log
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

RAMBOLL

Document ID:
Version #
Effective Date:
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Herrington Lake Adult Fish Tissue Collection and Chain-Of-Custudy Form

Study Lake or River: Herrington Lake	Sampling Location ID (e.g. LHL-2): LHL 6
Fish Sampling Location Description (e.g. Above Dix Dam): Back of cove	
KDFWR Wildlife Collection Permit#:	Notes / Observations: on trotline GS bait fished overnight
Date: 6/18 / 18	
Start Time: 1000	
GPS Coordinates (or where they can be found if collected electronically):	
Investigators:	Weather at Start:

Flow status (circle one): runoff event high flow low flow normal other

Sample #	Fish #	Genus	Species	Length (mm)	Weight (grams)	Comments
1 of 001	001	Ictalurus	punctatus	173	825	
	002					
	003	was	= WB 001 (CCF) - LHL6 - 180618 1 of 6			
	004					
	005					
	006					
	007					
	008					
	009					
	010					
	011					
	012					
	013					
	014					
	015					

Length (mm) of 75%tile of Longest Fish:	Total # Fish Collected in Sample:	
Collected by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

APPENDIX D: SAMPLE COLLECTION FIELD DATA SHEETS

Appendix D2: Young-of-the-Year Fish Sample Collection Data Sheets (Phase II)

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, FW	**Notes:** Recon Sampling
Sampling Date(s): July 17th, 2018	
Weather Forecast: 80F Sun/Cloud	
Air Temp: 80+ **Water Temp:** ~ 80 F	

YOY Bass Sampling Region (circle one):

Upper Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Upper Curds Inlet near CI 1	Minnow Traps (7)	930AM	1	15	
	Upper CI near outfall	Seine Net (Drop)	1045AM	2	~500+	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, DJ	**Notes:** * Analytical sample separate
Sampling Date(s): July 20, 2018	
Weather Forecast: UNK	
Air Temp: 80f **Water Temp:** 80f	

MiO

YOY Bass Sampling Region (circle one):

(Curds Inlet) HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Middle CI @ cove of outfall + just downstream eastshore	Seine (5 hauls)	1030	0.25	598	
	"	Seine (2 hauls)	"	0.25	128*	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, FW	**Notes:** * Also caught/released ~270 Silverside minnows
Sampling Date(s): Jul 21st, 2018	
Weather Forecast: UNK	
Air Temp: 85f **Water Temp:** ~82f	

YOY Bass Sampling Region (circle one):

(mid) Curds Inlet HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Middle CI @ dry outfall near CI2	Seine Net (9 pulls)	1500	.75	181	
	Middle CI @ wet outfall near CI 2.1	" (2 pulls)	1545	.25	49*	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): ASJ, DJ	**Notes:**
Sampling Date(s): July 20, 2018	
Weather Forecast: Sunny, possibly rain	
Air Temp: 72° **Water Temp:** estimate 80-85°	

YOY Bass Sampling Region (circle one):

(Lower Curds Inlet) HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Lower Curds CT-4 west shore	Seine net	10:45	2 hrs 15 mins	31	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): 7-21-18	**Notes:** directions (left, right) determined by looking into the cave/inlet
Sampling Date(s): Forest, Alan	
Weather Forecast: ~70° sunny	
Air Temp: ~70° **Water Temp:** estimate 80-85°	

YOY Bass Sampling Region (circle one):

Lower Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	3.2 transect right bank ~~left~~ bank	Trap	10:10	30 mins	10	
	mouth of inlet right side 300ft from point	trap	13:35	5mins	10	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Forest, Alan	**Notes:** directions (left, right) determined by looking into the cove/inlet
Sampling Date(s): 7-22-18	
Weather Forecast: Rain + overcast	
Air Temp: ~70° **Water Temp:** estimate 80°-85°	

YOY Bass Sampling Region (circle one):

(Lower Curds Inlet) HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	all of lower Curds inlet	traps	14:15	1hr 30mins	48	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, DT	**Notes:**
Sampling Date(s): July 27, 2018	
Weather Forecast: 75 cloudy	
Air Temp: 70 **Water Temp:** ~80	

YOY Bass Sampling Region (circle one):

(Lower Curds Inlet) HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Lower CI West Bank	minnow traps (5)	940am	0.5	27	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): ADSFW	**Notes:**
Sampling Date(s): Jul 23	
Weather Forecast: Rain 70f	
Air Temp: 70 **Water Temp:** ~80f	

YOY Bass Sampling Region (circle one):

(Lower Curds Inlet) HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	lower CI Westshore	Mini Traps	945AM	.5	4	
	" eastshore	"	1015	1hr	52	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, DJ	**Notes:**
Sampling Date(s): Jul 25, 2018	
Weather Forecast: Sunny 80f	
Air Temp: 80f **Water Temp:** ~82f	

YOY Bass Sampling Region (circle one):

LOWER Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	East Shore Rock Bowl	Minnow Traps (14)	1100	1.5hrs	56	
	"	Dip Net	1200	1hr ,5	53	
	"	Minnow Traps (14)	1230	.3hr	25	
	"	"	1330	.3hr	7	
		Dip Net	1345	.25	8	
	"	Minnow Traps (14)	1440	.25	11	
		Dip Net	1440	.5	11	

148

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS DJ	**Notes:**
Sampling Date(s): Thur Jul 26th	
Weather Forecast: 85f sunny	
Air Temp: 76f **Water Temp:** 82-84f	

YOY Bass Sampling Region (circle one):

(Lower Curds Inlet) HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	East Shore Rock Bowl near point	minnow Traps (14)	9 AM	1hr	80	
	"	dip net	930AM	0.25h	8	
	"	minnow Traps	300pm	1hr	28	
	"	Electro Shocking	345pm	0.5hr (3435)	43	

145
116
29

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, OJ	**Notes:**
Sampling Date(s): Jul 26th, 2018	
Weather Forecast: 86f Sunny	
Air Temp: 88f **Water Temp:** 82f+	

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	H2 Inlet East Bank Half of West bank	Electro shock	1100	1843s (1hr)	144	
	H2 Inlet Other Half of West bank back	bank II	1200	(1657s) .75hr	77	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, DJ	**Notes:**
Sampling Date(s): July 25, 2018	
Weather Forecast: Sunny 85 f	
Air Temp: 85 f **Water Temp:** 82 f	

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Each Bank ~100ft	Electro Shock	1340	1 Shock 488	61	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Forest, Alan	**Notes:** directions (left, right) determined by looking into the cove/inlet
Sampling Date(s): 7-24-18	
Weather Forecast: ~80° Sunny	
Air Temp: 80° **Water Temp:** estimate 80-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Waterfall at back of Inlet	dip net	13:00	48 mins	6	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Forest, Alan	**Notes:** directions (left, right) determined by looking into the cove/inlet
Sampling Date(s): 7-22-18	
Weather Forecast: rain and overcast	
Air Temp: ~72° **Water Temp:** est. mate 80-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	left side of HQ inlet, 200 ft of shoreline	Seine	10:35	10 mins	0	
	right side of HQ inlet, 300 ft of shoreline cased	Seine	10:50	1 hr	15	
	//	dip net	11:50	40 mins	1	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Forest, Alan
Sampling Date(s): 7-21-18
Weather Forecast: ~70° sunny
Air Temp: 70° Water Temp: estimate 80-85°

Notes: directions (left, right) determined by looking into the cave/inlet

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Fallen Branch at waterfall at back of Inlet	Trap	14:10	5mins	2	
	right side of inlet, Start at 200 feet from waterfall	Seine	14:40	2hrs 20mins	105	
	covered ~200 ft of bank					

Notes:
a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).
b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Forest, Alan	**Notes:** directions (left, right) determined by looking into the cave/inlet
Sampling Date(s): 7-26-18	
Weather Forecast: ~70° sunny	
Air Temp: ~70 **Water Temp:** estimate 80-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Fallen Branch at waterfall at back of inlet	Traps	10:00	10mins	1	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS DJ	**Notes:** * FW 2 AM Arrived in H2 @ 1400 - Continued Seining on West Shore
Sampling Date(s): Jul 20, 2018	
Weather Forecast: Mixed 80f	
Air Temp: 80f **Water Temp:** ~78f-80f	

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Inner HQ @ back	Seine (3 hauls)	1300	1.0hr	40+10+10 ~= 60	
	H2 West Shore	" (5 hauls)	1400	0.5hr	~20fish	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, FW	**Notes:**
Sampling Date(s): July 17th, 2018	
Weather Forecast: 80f Sunny	
Air Temp: 80f **Water Temp:** 82f	

YOY Bass Sampling Region (circle one):

Curds Inlet | (HQ Inlet) | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	HQ Inlet near water fall	Minnow Trap (1)	1015	.25	~10	
	H2 Inlet " "	Seine Net	1300	∞ ~~.51~~	65	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, DJ	**Notes:**
Sampling Date(s): July 22, 2018	
Weather Forecast: 75 cloudy	
Air Temp: 70 **Water Temp:** ~80	

YOY Bass Sampling Region (circle one):

Curds Inlet | HQ Inlet | (LHL1(Rocky Arm)) | LHL2(Dix Dam) | LHL3 Cove | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	LHL-1 Rocky fork left fork @ waterfall	Dip net	1215	2	~570 + ~190	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, FW	**Notes:**
Sampling Date(s): July 17th, 2018	
Weather Forecast: 80f Sunny	
Air Temp: 80f **Water Temp:** ~82f	

YOY Bass Sampling Region (circle one):

Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | **LHL3 Cove** | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	LHL 3 Inner Cove	Seine Net	1400	1.5	25	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Forrest, Alan	**Notes:**
Sampling Date(s): 7-20-18	
Weather Forecast: Sunny	
Air Temp: 72 **Water Temp:** est. mate 80-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | (LHL3 Cove) | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	LHL-3 cove	Seine	15:00	0.5 (30mins)	3	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Forest, Alan	**Notes:**
Sampling Date(s): 7-22-18	
Weather Forecast: Overcast / slight rain	
Air Temp: ~68° **Water Temp:** estimate 80-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) (LHL3 Cove) LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	LHL-3 cove	dip net	15:50	0.5 (30 mins)	2	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, FW	**Notes:**
Sampling Date(s): July 23, 2018	
Weather Forecast: Cloudy	
Air Temp: 66 **Water Temp:** estimate 80°-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | (LHL3 Cove) | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	LHL-3 Cove	Traps	11:30	0.25	2	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): ~~AOS~~ FW	**Notes:**
Sampling Date(s): July 24, 2018	
Weather Forecast: 86f Sunny	
Air Temp: 86 **Water Temp:** 82f	

YOY Bass Sampling Region (circle one):

Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | **LHL3 Cove** | LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	LHL3 Cove	Minnow Traps (6)	930AM	0.5hr	2	
	LHL3 North ~~Cove~~	" (7)	1500 ~~945AM~~	1 hr	0 (only adults)	
	"	Seine Net (1 pull)		.25hr	0	
	LHL3 M Cove NS	" (2 pulls)		.5 hr	0	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS,	**Notes:**
Sampling Date(s): Jul 26th, 2018	
Weather Forecast: 80F Sunny	
Air Temp: 90 **Water Temp:** est. mate 80-85	

Harding Inlet

YOY Bass Sampling Region (circle one):

Curds Inlet HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Both Banks of NI	Electro Shock	1330	1.0 (1595s)	41	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, EW	**Notes:**
Sampling Date(s): Jul 16, 2018	
Weather Forecast: 80F Rain	
Air Temp: 80F **Water Temp:** 82F	

YOY Bass Sampling Region (circle one):

HARDIN Inlet

Curds Inlet HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	HI near boat ramp	Seine Net	1800	.5hr	~230	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): AJS, DJ	**Notes:**
Sampling Date(s): Jul 25, 2018	
Weather Forecast: Sunny	
Air Temp: 70° **Water Temp:** ~~Estimate~~ 80 85°	

YOY Bass Sampling Region (circle one): HARDIN INLET

Curds Inlet HQ Inlet LHL1(Rocky Arm) LHL2(Dix Dam) LHL3 Cove LHL 6 Cove

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Boat Ramp 30' right	seine (2) pulls	830AM	.5	0	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Dan, Alan	**Notes:** directions (left, right) is determined by looking into the cove/inlet
Sampling Date(s): 7-23-19	
Weather Forecast: ~65° cloudy	
Air Temp: ~65° **Water Temp:** estimate 80-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | (LHL 6 Cove)

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	~~next~~ 300 ft left of water fall at end of cove	dip net	11:50	2 hrs 10 min	~~39~~ A.M. 109	
	500 ft left of waterfall at end of cove	Seine	12:05	2 hrs	392	
	At waterfall at end of cove	traps	19:30	30 min	11	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

Herrington Lake Young-Of-The-Year (YOY) FISH COLLECTION EFFORT FORM

RAMBOLL

Primary Fish Collector(s): Dom, Alan	**Notes:** directions (left, right) determined by looking into the cove/inlet
Sampling Date(s): 7-24-18	
Weather Forecast: ~70° Sunny	
Air Temp: ~70 **Water Temp:** estimate 80-85°	

YOY Bass Sampling Region (circle one):

Curds Inlet | HQ Inlet | LHL1(Rocky Arm) | LHL2(Dix Dam) | LHL3 Cove | **LHL 6 Cove**

Sample ID: e.g. (YOYBASS-001-LHL6), or (YOYBASS - 001TS - LHL6)	Sampling Location Description e.g. 50' north of CI2, west shore)	Sampling Method (Seine, Electrofish, Minnow Trap etc.)	Start Time (24hr clock)	Sampling Duration (in hrs)	Sample Size (N=)	No. in Photo[a,b] (N=)
	Small cove on right when heading into LHL-6 cove	traps	9:35	20 mins	12	
	//	dip net	9:55	20 mins	8	
	left bank ~300ft from waterfall	Seine	10:15	20 mins	50+	

Notes:

a) For unaffected YOY Bass, a maximum of 100 individuals will fit within 20" X 10" image field, providing detailed imagery of both the left and right sides of the fish (two photos).

b) For the YOY analytical subsample of approximately 10 YOY bass (minimum 5 grams total weight), detailed imagery will be captured of both the left and right sides of each individual (two photos) before they are frozen for shipment to the laboratory.

APPENDIX D: SAMPLE COLLECTION FIELD DATA SHEETS

Appendix D3: Lake Profiling and Surface Water Collection Data Sheets (Phase I Stratification and Overturn and Phase II Stratification)

PHASE I STRATIFICATION AND OVERTURN

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	CI-1
GPS Coordinates (or where they can be found if collected electronically)	CURDS INLET
Investigators: BG, KL	Date: 10-14-17 Time: 10:06
Temperature/Depth/Oxygen Probe Used	
Probe Calibration Date 10-14-17	
Secchi Disk Depth 6.5	

Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	PH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Observer Notes, if any
5	4.03	0.382	21.83	7.40	NONE	Y		SW-001(5)-CI-171014

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	CI-2	
GPS Coordinates (or where they can be found if collected electronically)	CURPS INLET	
Investigators: BG, KL		Date: 10-14-17 Time: 1045
Temperature/Depth/Oxygen Probe Used		
Probe Calibration Date 10-14-17		
Secchi Disk Depth 6ft		

Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	PH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Observer Notes, if any
10	4.38	0.365	21.76	7.98	NONE	Y		SW-001(10)-CI2-171014

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	~~CI-3~~
GPS Coordinates (or where they can be found if collected electronically)	CURDS INLET
Investigators: BG, KL	Date: 10-14-17
	Time: 11:15
Temperature/Depth/Oxygen Probe Used	
Probe Calibration Date 10-14-17	
Secchi Disk Depth 6ft	

Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Observer Notes, if any
10	4.49	0.348	21.79	8.14	NONE	Y		SW-001(10)-CI3-171014

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	CI4	
GPS Coordinates (or where they can be found if collected electronically)	CURDS INLET	
Investigators: BG, KL		Date: 10-14-17
		Time: 1215
Temperature/Depth/Oxygen Probe Used		
Probe Calibration Date 10-14-17		
Secchi Disk Depth 7ft		

Depth (feet)	DO (mg/L)	Cond.	Temp (°C or °F) °C	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Observer Notes, if any
20	3.50	0.339	21.74	8.11	NONE	Y		SW-002(20)-CI4-171014
70	1.28	0.300	20.10	7.82	NONE	Y		SW-001(70)-CI4-171014

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	HQ-1	
GPS Coordinates (or where they can be found if collected electronically)	Trimble Yuma	HQ Inlet
Investigators:		Date: Oct 3, 2017
		Time: 1535
Temperature/Depth/Oxygen Probe Used		YSI 650 MDS
Probe Calibration Date	Oct 3, 2017	WATER DEPTH 16 ft
Secchi Disk Depth	5 ft	

YSI Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	PH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	SAMPLE Sample ID (if collected) DEPTH	SAMPLE ID Observer Notes, if any
10	3.33	0.368	22.33	8.24	NONE	Y (10/4)	10 Ft	SW001(10)-HQ1-171004

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	HI-1	
GPS Coordinates (or where they can be found if collected electronically)	Trimble Yuma	Hardins Inlet
Investigators:	A Smith, B. Gorby	Date: Oct 3, 2017 / Time: 1556
Temperature/Depth/Oxygen Probe Used		YSI 650 MDS
Probe Calibration Date	Oct 3, 2017	WATER ~~TEM~~ DEPTH: 18 ft
Secchi Disk Depth	6 ft	

YSI Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	SAMPLE DEPTH (~~Sample ID (if collected)~~)	SAMPLE ID (~~Observer Notes, if any~~)
10	7.75	0.307	22.18	8.37	NONE	Y (10/5)	10 Ft	SW-001(10)HT1-171005

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	LHL-1 (one)	
GPS Coordinates (or where they can be found if collected electronically) Trimble Yuma		Rocky Fork / Rock Run
Investigators: A. Smith, B. Gaibe		Date: Oct. 6 2017 Time: 16:00
Temperature/Depth/Oxygen Probe Used		YSI 650 MDS
Probe Calibration Date Oct. 6, 2017		
Secchi Disk Depth 6ft		Water Depth: 75 ft - 110 ft

Depth (feet)	DO (mg/L)	Cond	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	SAMPLE ~~Sample ID (if collected)~~ Depth	SAMPLE ~~Observer Notes, if any~~ I.D.
20	2.85	0.314	22.1	8.07	Epilimnion	Y	20ft	SW-001(20ft) LHL1 -171006
60	0.70	0.292	19.23	7.74	Lake Bottom	Y	60ft	SW-002(60) LHL1 -171006

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	CHL-2 (CTwo)		
GPS Coordinates (or where they can be found if collected electronically)	Trimble Yuma	Dix Dam	
Investigators:	A. Smith, B. Garber	Date:	Oct 6, 2017
		Time:	1126 AM
Temperature/Depth/Oxygen Probe Used	451 & 550 MDS		
Probe Calibration Date	Oct 6, 2017		
Secchi Disk Depth	8 FT	WATER DEPTH: 195 FT	

Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	PH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	SAMPLE Sample ID (if collected) DEPTH	SAMPLE Observer Notes, if any ID	
10	5.65	0.313	22.47	8.56					
20	4.11	0.313	22.04	7.96	Epilimnion	y	25 FT	SW-001(25)CHL2	-171006
30	3.55	0.314	21.44	7.92					
40	2.32	0.333	21.63	7.56					
50	1.94	0.245	20.24	7.6	Top of Thermocline	y	50 FT	SW-002(50)CHL2	-171006
60	3.04	0.283	19.44	7.6					
70	1.77	0.274	17.71	7.47					
80	1.72	0.272	15.76	7.47					
90	1.63	0.262	14.16	7.47					
100	1.65	0.245	12.82	7.46	Hypolimnion	y	100 FT	SW-003(100)CHL2	-171006
110	1.63	0.24	12.06	7.48					
120	1.40	0.249	11.35	7.5					
130	2.84	0.24	10.63	7.56					
140	2.93	0.23	9.81	7.62					
150	2.57	0.228	9.5	7.67					
160	1.85	0.226	9.09	7.76					

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location: LHL-3	
GPS Coordinates (or where they can be found if collected electronically) Trimble Yuma	LHL3 - Mile Marker 1 (One)
Investigators: A Smith, B. Garbe	Date: Oct. 6 2017
	Time: 17:00
Temperature/Depth/Oxygen Probe Used	YSI 650 MDS
Probe Calibration Date Oct. 6 2017	
Secchi Disk Depth 8 Ft	Water Depth: 160

Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	PH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	~~Sample ID~~ (if collected) Depth	~~Observer Notes, if any~~ SAMPLE I.D.	
20	3.08	0.315	22.06	7.97	Epilimnion	Y	20ft	SW-001(20)LHL3	-171006
70	0.67	0.276	17.52	7.74	Thermocline	Y	70ft	SW-002(70)LHL3	-171006
100	0.68	0.248	13.28	7.48	Hypolimnion	Y	100ft	SW-003(100)LHL3	-171006

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

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RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	LHL-4
GPS Coordinates (or where they can be found if collected electronically) See Trimble Unit	Mile 1 / Mile 2 Marker
Investigators: AJS, BG	Date: Oct 7, 2017 Time: 1500
Temperature/Depth/Oxygen Probe Used	YSI 550 MDS
Probe Calibration Date	Oct 7, 2017
Secchi Disk Depth	7 ft
	Water Depth: 160 ft

Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Observer Notes, if any
20	8.63	NA 0.304	21.65 NA	7.95	Epilimnion	y	20	SW001(20)LHL4- 171007
70	7.83 ↓	0.292	13.44 ↓	7.11	Metalimnion	y	70	SW002(70)LHL4- 171007
100	1.08 ↓	0.243	13.34 ↓	8.00	Hypolimnion	y	100	SW003(100)LHL4- 171007

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	LHL-5
GPS Coordinates (or where they can be found if collected electronically) See Trimble Yuma	NE of Mallard Cove / Cane Run
Investigators: A. Smith B. Gaebe	Date: Oct. 7 2017 Time: 10:00
Temperature/Depth/Oxygen Probe Used	YSI 650 MDS
Probe Calibration Date Oct. 7 2017	
Secchi Disk Depth 8 ft	Water Depth: 158

YSI Depth (feet)	DO (mg/L)	Cond	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ~~Sample ID (if collected)~~ Depth	Sample ~~Observer Notes, if any~~ I.D.	
20	3.95	0.304	21.45	7.73	epilimnion	Y	20 ft	SW001(20)LHL5	-171007
70	1.18	0.274	17.83	7.22	Metalimnion	Y	70 ft	SW002(70)LHL5	-171007
100	0.90	0.258	13.12	7.32	Hypolimnion	Y	100 ft	SW003(100)LHL5	-171007

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

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Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	LHL-6	
GPS Coordinates (or where they can be found if collected electronically) See Trimble Yuma		Mile 3 / Mile 4 Marker
Investigators: AJS, BG		Date: Oct 7. 2017
		Time: 1300
Temperature/Depth/Oxygen Probe Used		NONE
Probe Calibration Date		WATER DEPTH: 130ft
Secchi Disk Depth 8 ft		

Sample Depth (feet)	DO (mg/L)	cond.	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample Sample ID (if collected) Depth	Sample Observer Notes, if any	
20	9.56 N	0.287	21.6 NO	7.69	Epilimnion	Y	20	SW001(20)LHL6 - IO	171007
70	2.46 ↓	0.270	18.37 ↓	7.57	Thermo	Y	70	SW002(70)LHL6 -	171007
100	2.41 ↓	0.238	13.44 ↓	7.34	Hypolimnion	Y	100	SW003(100)LHL6 -	171007

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location: DR-1	
GPS Coordinates (or where they can be found if collected electronically): See GPS	Dix River Below Dam
Investigators: KL, BB	Date: Oct 7, 2017 Time: 1615
Temperature/Depth/Oxygen Probe Used	YSI 650 MDS
Probe Calibration Date: Oct 7, 2017	
Secchi Disk Depth	

Depth (feet)	DO (mg/L)	Cond.	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	SAMPLE DEPTH (~~Sample ID (if collected)~~)	SAMPLE ID (~~Observer Notes, if any~~)
1	5.78	0.271	18.29	7.76	NONE	Y	1 ft	SW001(1)DR1-171007

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

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Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	CI-3		
GPS Coordinates (or where they can be found if collected electronically)	Sextrimble Yuma	Curds Inlet CI-3	
Investigators:		**Date:**	Mon Dec 11th 2017
		Time:	1315
Temperature/Depth/Oxygen Probe Used		YSI 650 MDS	
Probe Calibration Date	12/6/17		
Secchi Disk Depth	5.5 Ft	WATER DEPTH = 18 Ft	With Sample = 9 Ft midway down

YSI Depth ~~(feet)~~ Ft	DO (mg/L) ↙	mS/cm Cond.	Temp (oC or oF) ↙	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Sample ID Observer Notes, if any
9	7.03	0.488	13.51	8.04	NONE	Y	9 Ft	

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	LHL2 (TW01)		
GPS Coordinates (or where they can be found if collected electronically)	See Trimble Yuma	LHL2 - Dix Dam	Air Temp = 5°C (from YSI)
Investigators:	A. Smith, B. Gonzo	**Date:**	Dec 11, 2017
		Time:	915 AM
Temperature/Depth/Oxygen Probe Used		YSI 650 MDS	
Probe Calibration Date	Dec 6th, 2017	Checked Dec 11, 2017	Winter Sampling @ 25 Ft
Secchi Disk Depth	9 Ft		

WATER DEPTH = 190 Ft

Depth (feet)	DO (mg/L)	mS/cm Cond.	Temp (°C or °F)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Observer Notes, if any
							Depth	
10	5.34	0.341	13.12	7.86	NONE			
20	5.37	0.341	13.12	7.86		Y	25 Ft	SW001(25)LHL2-171211
30	5.35	0.341	13.12	7.86		~~Y~~		
40	5.36	0.341	13.12	7.86				
50	5.33	0.341	13.12	7.86				
60	5.32	0.341	13.12	7.86				
70	5.30	0.341	13.12	7.86				
80	5.29	0.341	13.12	7.86				
90	5.28	0.341	13.12	7.86				
100	5.26	0.341	13.12	7.85				
110	5.22	0.341	13.12	7.85				
120	5.14	0.341	13.11	7.84				
130	4.65	0.340	12.98	7.80				
140	2.24	0.339	12.42	7.62				
150	1.68	0.337	12.30	7.56				

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	LHL1		
GPS Coordinates (or where they can be found if collected electronically)	See trimble	LHL1 - Rocky Run	
Investigators:	A Smith B. Gorbe	**Date:**	Mon Dec 11th, 2017
		Time:	1115 AM
Temperature/Depth/Oxygen Probe Used	YSI 650 MDS		
Probe Calibration Date	12/6/17	Winter Sample @ 25 ft	
Secchi Disk Depth	8 Ft		

YSI Depth (feet) ft	DO (mg/L)	mS/cm Cond	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected) Depth	Sample ID Observer Notes, if any
25Ft	5.56	0.339	13.08	7.92	NONE	Y	25 Ft	

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	LHL3	
GPS Coordinates (or where they can be found if collected electronically) See trimble Yuma		LHL3
Investigators: A Smith, B. Gorbe		**Date:** Tues Dec 12th 2017 **Time:** 12:45 PM
Temperature/Depth/Oxygen Probe Used		USI 650 MDS
Probe Calibration Date 12/6/17 Checked 12/11/17		WATER DEPTH = 225 Ft
Secchi Disk Depth : 9 ft		

Winter SW Sample @ 25 Ft

Depth (feet)	DO (mg/L)	Cond. (mS/cm)	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected) Depth ft	Observer Notes, if any Sample ID
90	5.43	0.340	13.03	7.91	NONE			
70	5.41	0.340	13.03	7.91	"			
50	5.40	0.340	13.02	7.90	"			
20	5.42	0.340	13.03	7.90	"	Y	25 Ft	SW001(25)-LHL3-171212

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

RAMBOLL ENVIRON

Herrington Lake Surface Water Quality and Dissolved Oxygen Profile Data Collection Sheet

Herrington Lake Transect Location	CHL 6	
GPS Coordinates (or where they can be found if collected electronically)	See trimble Yuma	CHL 6
Investigators:	A. Smith, B. Garbe	**Date:** Tues, Dec 12th, 2017 **Time:** 12:00
Temperature/Depth/Oxygen Probe Used		YSI 650 MDS
Probe Calibration Date	12/6/17 - Checked 12/11/17	WATER DEPTH = 200 FT
Secchi Disk Depth	7 Ft	W. Water Sample @ 25 Ft

Depth (feet)	DO (mg/L)	Cond. (mS/cm)	Temp (oC or oF)	pH	Stratification Layer (if known)	Was Surface Water Collected? (Y,N)	Sample ID (if collected)	Observer Notes, if any
90	4.98	0.329	13.08	7.87	NONE		Depth Ft	Sample ID
70	5.00	0.329	13.08	7.89	"			
50	5.05	0.330	13.08	7.87	"			
20	5.05	0.330	13.08	7.87	"	4	25 Ft	SW00(25)CHL6-121212

Notes

DO	Dissolved oxygen
Temp	Temperature
°C	Degrees Celcius
°F	Degrees Fahrenheit
mg/L	milligrams per liter
Y/N	Yes or No

PHASE II STRATIFICATION

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Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Herrington Lake Transect Location (e.g. CI-1):** CI-2
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJW, FW	**Date:** 6-21-18
Water Quality Probe (e.g. YSI 650 MDS): 650 MDS, 8920 V2	**Start Time:** 12:40
Probe Calibration Date: June 21, 2018	**Weather at start:** Rain 80 F
Secchi Disk Depth (in feet): 2-3 Ft	**Water Depth (surface to bottom):** 8-10 Ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	0.65	0.220	29.74C°	9.03			
2	1.18	0.220	29.77C°	9.35			
4	1.48	0.206	29.71 C°	9.30			
6	1.32	0.297	29.30C°	9.31			
~~8~~							

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Herrington Lake Transect Location (e.g. CI-1):** CI-2.1
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:** 6-21-18
Water Quality Probe (e.g. YSI 650 MDS): 650 MDS, 6920 V2	**Start Time:** 11:26
Probe Calibration Date: June 21, 2018	**Weather at start:** ~~Rain~~ Cloudy 80°
Secchi Disk Depth (in feet): 2-3 ft	**Water Depth (surface to bottom):** 10-12 ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	1.93	0.220	29.78 C°	9.46			
2	2.03	0.220	29.78 C°	9.42			
4	2.02	0.220	29.77 C°	9.43			
6	1.96	0.240	29.52 C°	9.3			
8	1.51	0.512	27.6 C°	8.85			
10	~~1.01~~ 1.01	0.719	25.1 C°	8.41			
~~7~~							
~~OB~~							

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Herrington Lake Transect Location (e.g. CI-1):** CI 2.2
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:**
Water Quality Probe (e.g. YSI 650 MDS): YSI 650MDS, 6920 V2	**Start Time:** 1100
Probe Calibration Date: June 5th, 2018	**Weather at start:** Sunny 84F
Secchi Disk Depth (in feet): 2ft	**Water Depth (surface to bottom):** 20ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
10	10.86	0.566	26.04	8.26	NONE	Y	SW001(10)-CI2.2-180616

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Herrington Lake Transect Location (e.g. CI-1):** CI - 3
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, PW	**Date:** 6-21-18
Water Quality Probe (e.g. YSI 650 MDS): 650 MDS, 6920 V2	**Start Time:** 10:50
Probe Calibration Date: June 21, 2018	**Weather at start:** Rain 78°F
Secchi Disk Depth (in feet):	**Water Depth (surface to bottom):** 20ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	2.72	0.220	29.84C'	9.36			
2	1.98	0.220	29.86C'	9.29			
4	2.10	0.220	29.85C'	9.23			
6	2.07	0.235	29.36C'	9.14			
8	2.17	0.350	28.7C'	8.95			
10	1.70	0.629	25.85C'	8.55			
12	1.38	0.570	24.25C'	8.34			
14	0.57	0.584	24.43C'	7.92			
16	0.51	0.510	23.68C'	7.79			
18	0.31	0.520	23.62 C'	7.62			
~~20~~							

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Herrington Lake Transect Location (e.g. CI-1):** CI 3.1
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:** Sat June 16, 2018
Water Quality Probe (e.g. YSI 650 MDS): YSI 650MDS, 6920V2	**Start Time:** 1200
Probe Calibration Date: Fri June 15th, 2018	**Weather at start:** 80f Sunny
Secchi Disk Depth (in feet): 3ft	**Water Depth (surface to bottom):** 26 ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
13	11.46	0.719	24.29c	7.88	NONE	Y	SW001 (13)-CI3.1-180616

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Page __ of __

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Herrington Lake Transect Location (e.g. CI-1):** CI 3.2
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:** June 21, 2018
Water Quality Probe (e.g. YSI 650 MDS): YSI 650MDS, 600XLM	**Start Time:** 10 15 AM
Probe Calibration Date: June 20, 2018	**Weather at start:** Drizzle 80f
Secchi Disk Depth (in feet): 3 ft	**Water Depth (surface to bottom):** 27 ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conductivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	6.02	0.219	29.84C'	9.34			
2	4.90	0.219	29.86C'	9.31			
4	5.53	0.218	29.85C'	9.26			
6	5.58	0.220	29.85C'	9.28			
8	4.25	0.355	28.49C'	8.9			
10	3.11	0.582	25.64C'	8.39			
12	2.47	0.623	25.10C'	8.04			
14	1.64	0.567	24.28C'	7.74			
16	1.21	0.534	23.96C'	7.75			
18	0.58	0.475	23.39C'	7.56			
20	0.31	0.392	22.65C'	7.81			
22	0.20	0.386	22.39C'	7.66			
24	0.16	0.395	22.30C'	7.58			
26	0.15	0.402	22.36C'	7.54			

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Herrington Lake Transect Location (e.g. CI-1):** CI-4
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:** ~~6~~ June 16, 2018
Water Quality Probe (e.g. YSI 650 MDS): 650MDS, 6920V2, 600XLM	**Start Time:** 1300
Probe Calibration Date: June 15th, 2018	**Weather at start:** 85°F Sunny
Secchi Disk Depth (in feet): 3ft	**Water Depth (surface to bottom):** 75-90ft
Notes or Observations: * Additional Confirmation w. U-10 portable WQ meter	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	—	—	—	—			
10	9.52	0.482	26.28	8.37		Y	SW002(10)-CI4-186616
20	4.77	0.711	24.38	7.8			
30	1.65	0.580	22.09	7.19			
40	0.86	0.396	19.41	7.09			
50	0.91	0.318	16.78	6.89			
60	0.98	0.300	14.32	5.66			
70	0.63	0.309	15.12	5.98		Y	SW002(70)-CI4-186616
80	1.23	0.313	14.19	6.08			
Confirmation w 600XLM							
0	14.10	0.219	30.84	7.70			
10	11.00	0.645	26.27	7.33			
15	9.06	0.667	25.31	7.37			
20	1.12	0.408	22.86	7.17			
30	0.63	0.435	22.26	7.16			
40	0.51	0.350	20.38	7.20			
50	0.42	0.292	18.95	7.22			
60	0.42	0.292	18.95	7.27			
70	0.58	0.293	19.00	7.36			
80	0.56	0.293	18.90	7.41			

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

Confirmation w. U-10

10	10.70
15	8.52
20	1.36

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): HQ Inlet	**Herrington Lake Transect Location (e.g. CI-1):** HQ1
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:** June 15, 2018
Water Quality Probe (e.g. YSI 650 MDS): YSI 650, 6920 V2	**Start Time:** 1530
Probe Calibration Date: June 15th	**Weather at start:** 90 F Sunny
Secchi Disk Depth (in feet): 2-3ft	**Water Depth (surface to bottom):** 52 ft
Notes or Observations: - debris floating - very turbid w. particulate - ms/ms 0 2 10 ft	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conductivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	12.57	~~0.427~~ 0.205	30.52	8.9			
10	7.03	~~0.531~~ 0.627	25.26	7.06		Y	SW001(10)-HQI-180615
20	0.53	~~0.428~~ 0.531	22.95	6.25			
30	0.54	0.428	21.30	6.04			
40	0.52	0.367	19.79	5.82			
50	0.94	0.287	16.63	5.64		Y	SW001(50)-HQI-180615
Confirmation w.			YSI 650,	XL M600			
0	14.26	0.222	31.85	8.89			
10	6.06	0.559	25.44	7.59			
20	0.52	0.343	22.60	7.47			
30	0.40	0.311	21.72	7.40			
40	0.38	0.314	20.33	7.36			
50	1.40	0.208	16.42	7.40			

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): LHL1 Rocky Fork	**Herrington Lake Transect Location (e.g. CI-1):** LHL1
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:** June 15, 2018
Water Quality Probe (e.g. YSI 650 MDS): YSI 650, 692012, 600XLM	**Start Time:** 1320
Probe Calibration Date: June 15, 2018	**Weather at start:** ~86f Sunny
Secchi Disk Depth (in feet): 3ft	**Water Depth (surface to bottom):** ~80ft
Notes or Observations: Confirmation w. YSI 650/ 600XLM	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	–	–	–	–			
10	6.7	0.278	25.50	7.66		y	SW002(10)-LHL1-180615
20	4.3	0.354	22.59	7.30			
30	2.23	0.347	21.17	6.97			
40	0.68	0.321	19.17	6.72			
50	0.58	0.302	16.47	6.35			
60	0.64	0.316	14.45	6.08			
70	0.75	0.306	15.46	6.15		y	SW002(70)-LHL1-180615
	Confirmation w.		600 XL	M			
0	15.25	0.208	31.27	8.80			
10	5.61	0.269	21.29	8.07			
20	1.20	0.347	22.38	7.56			
30	0.68	0.333	21.74	7.41			
40	0.70	0.267	20.39	7.35			
50	0.34	0.232	16.59	7.32			
60	0.42	0.221	14.30	7.81			
70	0.32	0.216	13.54	7.69			

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): DIX DAM	**Herrington Lake Transect Location (e.g. CI-1):** LHL2
GPS Coordinates (or where they can be found if collected electronically): TRIMBLE YUMA	
Investigators: AJS, FW	**Date:** 6/18/18
Water Quality Probe (e.g. YSI 650 MDS): YSI 6050 MDS, 6920 V2	**Start Time:** 10AM
Probe Calibration Date: 6/18, 2018	**Weather at start:** 80 F SUNNY
Secchi Disk Depth (in feet): 3-4 FT	**Water Depth (surface to bottom):** 190-200 FT
Notes or Observations: *CONFIRMATION OBSERVATIONS MADE WITH HORIBA U-10 -SW Samples not taken @ LHL2	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

DO %	YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conductivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	Confirmation DO ~~SW Sample ID~~ (mg/L) 6118	Confirmation w/ 6600 xLM DO membrane (mg/L) 6119
171.7	0	12.9	0.203	30.60	9.11		N	12.92	14.33
110.9	10	9.11	0.303	25.27	7.91		|	5.43	5.14
N/A	15	N/A	N/A	N/A	N/A		|		~~0.41~~ 1.44
7.6	20	0.65	0.376	22.97	7.13		|		0.41
6.8	30	0.60	0.279	21.62	7.08		|		
6.5	40	0.59	0.285	20.27	6.95		|		
14.7	50	1.43	0.202	16.70	6.81		|	0.77	0.50
39.6	60	4.07	0.183	14.12	6.77		|	2.43	4.71
42.1	70	4.39	0.186	13.44	7.51		|		
49.1	80	5.18	0.186	12.88	7.38		|		
58.4	90	6.23	0.180	12.44	7.26		|		
57.2	100	6.12	0.179	12.27	7.25		|	5.1	7.60
56.1	110	6.03	0.177	12.12	7.16		|		
55.9	120	6.03	0.170	11.93	7.14		|		
54.2	130	5.88	0.162	11.66	7.08		|		
48.7	140	5.33	0.161	11.26	7.02		|		
41.0	150	4.52	0.161	10.93	6.94		|		
43.6	160	4.82	0.159	11.04	7.0		|		
30.4	170	3.38	0.161	10.75	6.92		|		
5.9	180	0.66	0.168	10.33	6.75		|		
5.6	190	0.63	0.173	10.03	6.72		↓		
7.0	200	0.79	0.170	9.99	6.83				

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): CHL3 Cove	**Herrington Lake Transect Location (e.g. CI-1):** CHL3 Cove
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, FW	**Date:** Friday June 15th, 2018
Water Quality Probe (e.g. YSI 650 MDS): YSI 650, 6920 V2	**Start Time:** 1410
Probe Calibration Date: June 15th	**Weather at start:** 90f Sunny
Secchi Disk Depth (in feet): 3 ft	**Water Depth (surface to bottom):** 65-80ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

DO%	YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conductivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
33.0	10	2.71	0.350	25.32c°	7.63		y	SW001(10)-CHL3-180615
5.8	20	0.46	0.464	23.12	7.24			
6.0	30	0.48	0.347	21.14	7.17			
6.2	40	0.50	0.307	19.12	6.96			
15.0	50	1.20	0.276	16.48	6.71			
37.8	60	3.02	0.268	14.32	6.56		y	SW001(80)-CHL3-180615
								*See variable water depth water sample taken at 80

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): LHL6 Near Marina	**Herrington Lake Transect Location (e.g. CI-1):** LHL6 Cove
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: AJS, EW	**Date:** Jan 5, 2018
Water Quality Probe (e.g. YSI 650 MDS): YSI 650 MDS, 8920V2	**Start Time:** 1110
Probe Calibration Date: Jan 15, 2018	**Weather at start:** 81F Sunny
Secchi Disk Depth (in feet): 3 Ft	**Water Depth (surface to bottom):** 180ft
Notes or Observations:	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
0	19.62	0.211	28.52	9.39			
10	1.29	0.265	24.56	8.12		Y	SW001(10)-LHL6-180617
15	—	—	—	—			
20	1.02	0.298	22.28	7.55			
30	1.00	0.294	21.10	7.48			
40	1.69	0.257	19.28	7.51			
50	5.18	0.254	16.01	7.29		Y	SW001(50)-LHL6-180617
60	6.43	0.254	13.77	6.98			
70	8.67	0.253	13.02	6.72			
80	9.44	0.254	12.65	6.58			
90	10.49	0.253	12.28	6.42			
100	10.67	0.251	12.07	6.27		Y	SW001(100)-LHL6-180617
110	10.85	0.246	11.72	6.06			
120	10.21	0.244	11.53	5.87			
130	10.17	0.242	11.31	5.67			
140	8.76	0.247	10.87	5.28			
150	1.37	0.253	10.65	5.07			

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

RAMBOLL

Herrington Lake Surface Water Collection and Profiling Data Form

Sampling Region (e.g. Curds Inlet): LHL6	**Herrington Lake Transect Location (e.g. CI-1):** LHL6
GPS Coordinates (or where they can be found if collected electronically): Trimble Yuma	
Investigators: HDT, FW	**Date:** 6/15/18
Water Quality Probe (e.g. YSI 650 MDS): YSI 650 MDS, HORIBA U-10	**Start Time:** 1110
Probe Calibration Date: 6/19/2018 600 XLM	**Weather at start:** 83°F Sunny
Secchi Disk Depth (in feet): 3FT	**Water Depth (surface to bottom):** ~~83°F~~ Sunny ~160ft
Notes or Observations: * CONFIRMATION OBSERVATIONS MADE WITH U-10	Stratification Layers for Reference: Epilimnion - Sunlight zone with higher DO and water temp. Metalimnion (Thermocline) - water temp and DO drops. Hypolimnion – Deep zone - lower stable DO and water temp.

DO%	YSI / SW Sample Depth (feet bws)	Dissolved Oxygen (DO in mg/L)	Conduct-ivity (mS/cm)	Water Temperature (°C or °F)	pH	Stratification Layer (if known)	Surface Water Sample? (Y/N)	SW Sample ID
265	0	11.53	0.199	30.61	9.35			
15.6	10	1.35	0.249	24.65	7.98		Y	SW001(10)-LHL6-180617
5.3	15	0.56	0.257	23.10	7.88			
3.4	20	0.32	0.247	22.19	7.77			
3.1	30	0.29	0.238	21.49	7.64			
4.8	40	0.51	0.215	19.94	7.69			
31.3	50	3.07	0.194	16.37	7.81		Y	SW001(50)-LHL6-180617
55.1	60	5.37	0.177	13.97	7.44			
56.5	70	5.83	0.175	13.20	7.40			
63.1	80	6.50	0.175	12.89	7.40			
70.9	90	7.36	0.173	12.72	7.43			
78.0	100	8.29	0.173	12.54	7.44		Y	SW001(100)-LHL6-180617
82.2	110	8.81	0.169	12.28	7.48			
82.2	120	8.79	0.167	12.10	7.48			
83.0	130	8.93	0.163	11.92	7.51			
81.5	140	8.77	0.161	11.77	7.50			
83.3	150	9.03	0.161	11.75	7.50			
73.9	160	8.09	0.160	11.48	7.48			

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

* WATER QUALITY UNIT (conf)

DEPTH	DO (mg/L)
10	3.49
40	0.30
50	0.63

APPENDIX D: SAMPLE COLLECTION FIELD DATA SHEETS

Appendix D4: Sediment and Sediment Pore Water Collection Data Sheets (Phase II)

RAMBOLL

Herrington Lake Sediment Collection Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Sampling Date:** June 19th, 2018
GPS Coordinates (or file location if collected digitally): Trimble Yuma	**Start Time** (Boat Launched): 10 AM
REH Investigator(s): DG	**Weather at Start:**
Dive Crew; Diver(s) down: ~~Shawn Harris~~, Spencer George	81f sunny
Notes or Observations: - hot, humid - trot lines pulled from curds Inlet - Spencer George - Divers Down for CI1A, B - Only	

Sample Location/ Transect	Sample Time	Water Depth (in feet)	Local Bottom Substrate (Rocky, Silty, etc.,)	Field Dup or MS/MSD?	Jar #s and size collected	PW Peeper Deployed? (Y or N)	Sediment Sample ID	Location Notes
Spencer CI1B	1230	10ft	clay -silt -debris	No	None	y	None	only 50' across
CI1A	1245	13ft	-more loose rocks silt	FD	None	y	"	MAX 13ft deep
Derek CI2B	1300	16ft	sandy mud woody debris	No	Non	y	"	max 16ft deep
• CI2.1 A	1330	18ft	silty mud 80/20	No	3x 40z	y		max 18ft
• CI2.1 B	1340	17ft	"	No	3x 40z	y		
• CI2.1 C	1350		"	No	4 3/4x 40z	~~y~~ N		- one extra Jar to ensure Volume

* - peeper says 17ft

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

Sediment Collection / Pore Water Deployment
Configuration Sketch and/or Rellocation Notes:

RAMBOLL

Herrington Lake Sediment Collection Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Sampling Date:** Tues June 19th
GPS Coordinates (or file location if collected digitally): Trimble Uuma	**Start Time** (~~Boat launched~~): @ Sample location
REH Investigator(s): AJS	**Weather at Start:**
Dive Crew; Diver(s) down: Derek Proffitt	~88f sunny humid
Notes or Observations: -	

Sample Location/ Transect	Sample Time	Water Depth (in feet)	Local Bottom Substrate (Rocky, Silty, etc.,)	Field Dup or MS/MSD?	Jar #s and size collected	PW Peeper Deployed? (Y or N)	Sediment Sample ID	Location Notes
CI2.2 A	1415	19ft	rocky silty	No	3x 4oz	y		max 19 ft deep
CI2.2 B	1425	17ft	50/50 silt mud	No	3x 4oz	y		
CI2.2 C	1430	10ft	25 Cobble 25 Gravel 50 Silt	FD	6x 4oz	N		- Field dup
CI4 A								- No
CI4 B								

Derek

Shawn

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

Sediment Collection / Pore Water Deployment Configuration Sketch and/or Rellocation Notes:

RAMBOLL

Herrington Lake Sediment Collection Form

Sampling Region (e.g. Curds Inlet):	**Sampling Date:** Wed June 20th, 2018
GPS Coordinates (or file location if collected digitally): Trimble Yuma	**Start Time** (Boat Launched): 830AM
REH Investigator(s): AJS	**Weather at Start:** 80F sunny humid
Dive Crew; Diver(s) down: Shawn Nairn	
Notes or Observations: Sediment Samples already collected on June 19th @ CI4A, B	

Sample Location/ Transect	Sample Time	Water Depth (in feet)	Local Bottom Substrate (Rocky, Silty, etc.,)	Field Dup or MS/MSD?	Jar #s and size collected	PW Peeper Deployed? (Y or N)	Sediment Sample ID	Location Notes
CI4A	920	72ft	other field sheet	No	other field sheet	Y	other field sheet	Peeper deployed on cord line @ Thalweg 72ft
CI4B	930	17ft	"	No	"	Y	"	" @ 17ft
CI3.2A	1030	35ft	75/25 Sand/Small Gravel	No	3x 4oz	Y		@
CI3.2B	1045	12ft	rocky looking for sed	Peeper MS/MSD	3x 4oz	Y MS/MSD		- dive @ 17ft searching for sediment to deploy peepers
CI4 C	930	10ft	pebbles pockets of silt	Sed MS/MSD	9x 4oz + extra bag for volume	N		
CI3.2C	1050	10ft	NA	No	3x 4oz	N		

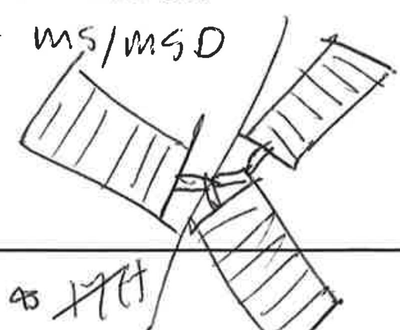
Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

Sediment Collection / Pore Water Deployment Configuration Sketch and/or Rellocation Notes:

- CI4A @ 72ft deep, silty knee deep sediment

- CI3.2B Peeper MS/MSD



~~17ft~~ 29ft - where sediment avail.

RAMBOLL

Herrington Lake Sediment Collection Form

Sampling Region (e.g. Curds Inlet): Curds Inlet	**Sampling Date:** June 20th, 2018
GPS Coordinates (or file location if collected digitally):	**Start Time** (~~Boat Launched~~): Arrived @ CI 3.1 1120AM
REH Investigator(s): AJ3	**Weather at Start:** 88f Sunny humid hot.
Dive Crew; Diver(s) down: Derek Proffitt	
Notes or Observations:	

Sample Location/ Transect	Sample Time	Water Depth (in feet)	Local Bottom Substrate (Rocky, Silty, etc.,)	Field Dup or MS/MSD?	Jar #s and size collected	PW Peeper Deployed? (Y or N)	Sediment Sample ID	Location Notes
CI 3.1A	1130	30ft	silty mud	Peeper FD	3x 4oz	y FD		- deep sediment
CI 3.1B	1140	17ft		No	3x 4oz	y		
CI 3.1C	1150	10ft	Pebbles silt	No	3x 4oz	N		
CI 3A	1240	23ft	50/50 sand silt	Peeper Set FD	3x 4oz	y FD		- Set 3A is FD
CI 3B	1250	~~20ft~~ 17ft	more rocky	No	3x 4oz	y	- Peeper @ 20ft	- diver looking for set - boulders & gravel
CI 3C	1300	10ft	50/25/25 & sand/ Cobble/silt	No	3x 4oz	N		

Notes:

°C	Degrees Celsius
°F	Degrees Fahrenheit
bws	below water surface
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
pH	Potential of Hydrogen
Y/N	Yes or No

Sediment Collection / Pore Water Deployment Configuration Sketch and/or Rellocation Notes:

APPENDIX D: SAMPLE COLLECTION FIELD DATA SHEETS

Appendix D5: Aquatic Vegetation Field Data Sheets (Phase I)

MTS

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

See CI-1 coordinates

STREAM NAME CI-1	LOCATION Curds Inlet
STATION # _____ RIVERMILE _____	STREAM CLASS NA
LAT GPS LONG GPS	RIVER BASIN Herrington Lake
STORET # AV	AGENCY
INVESTIGATORS	
FORM COMPLETED BY M. Sorensen	DATE 10/4/17 TIME ~~11:50~~ 11:30 AM ~~PM~~
REASON FOR SURVEY CAP	

WEATHER CONDITIONS

Sun

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
0% ☐	%cloud cover	☐ 25%
☑	clear/sunny	☑

Has there been a heavy rain in the last 7 days? ☐ Yes ☑ No

Air Temperature ____ °C 70's F

Other _____

SITE LOCATION/MAP

CI-1

AV-001 ~~(01)~~ -CI-1-171004

1130 MTS

Draw a map of the site and indicate the areas sampled (or attach a photograph)

See CAP

Vegetation ID

AV-001-CI-171004

Sample collected along ~~wadeable~~ MTS wadeable shoreline. Periphyton abundant on rocks and duckweed abundant in water

Collected by wading and kayak

~~STREAM~~ CHARACTERIZATION

Vegetation Sample weight

Stream Subsystem MTS ☐ Perennial ☐ Intermittent ☐ Tidal

Stream Type ☐ Coldwater ☐ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☐ Other _____

Catchment Area _____ km²

weight: 240.71g

CI-1 (Pg 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

MTS

CI-1

WATERSHED FEATURES See CAP Maps	**Predominant Surrounding Landuse** ❑ Forest ❑ Commercial ❑ Field/Pasture ❑ Industrial ❑ Agricultural ❑ Other _____ ❑ Residential Adjacent EWBrown **Local Watershed NPS Pollution** ❑ No evidence ❑ Some potential sources ❑ Obvious sources **Local Watershed Erosion** ❑ None ❑ Moderate ❑ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ❑ Trees ☒ Shrubs ❑ Grasses ☒ Herbaceous **dominant species present** _____
INSTREAM FEATURES See CAP Maps	**Estimated Reach Length** _____m **Estimated Stream Width** _____m **Sampling Reach Area** _____m^2 **Area in km^2 (m^2x1000)** _____km^2 **Estimated Stream Depth** _____m **Surface Velocity (at thalweg)** _____m/sec **Canopy Cover** ❑ Partly open ❑ Partly shaded ❑ Shaded **High Water Mark** _____m **Proportion of Reach Represented by Stream Morphology Types** ❑ Riffle_____% ❑ Run_____% ❑ Pool_____% **Channelized** ❑ Yes ❑ No **Dam Present** ❑ Yes ❑ No
LARGE WOODY DEBRIS	**LWD** _____m^2 Qualitative - LWD prevalent **Density of LWD** _____m^2/km^2 **(LWD/ reach area)**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ❑ Rooted emergent ❑ Rooted submergent ☒ Rooted floating ☒ Free floating ☒ Floating Algae ❑ Attached Algae **dominant species present** periphyton duckweed some sedge **Portion of the reach with aquatic vegetation** ____% (~80% periphyton)
WATER QUALITY See Water Quality Sheet Logger	**Temperature**_____° C **Specific Conductance**_____ **Dissolved Oxygen** _____ **pH** _____ **Purbidity** _____ **WQ Instrument Used** _____ slightly turbid at outfall mixing **Water Odors** ☒ Normal/None ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Fishy ❑ Other_____ **Water Surface Oils** ❑ Slick ❑ Sheen ❑ Globs ❑ Flecks ☒ None ❑ Other_____ **Turbidity (if not measured)** ☒ Clear ❑ Slightly turbid ❑ Turbid ❑ Opaque ❑ Stained ❑ Other_____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Anaerobic ❑ None ❑ Other_____ **Oils** ☒ Absent ❑ Slight ❑ Moderate ❑ Profuse **Deposits** ❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand ❑ Relict shells ❑ Other_____ **Looking at stones which are not deeply embedded, are the undersides black in color?** ☒ Yes ☒ No NMS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		✓	Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")	✓			
Cobble	64-256 mm (2.5"-10")	✓	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	✓			
Sand	0.06-2mm (gritty)	✓	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	✓			
Clay	< 0.004 mm (slick)	✓ MTS			

CI-1 (Pg 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

LAKE MTS

~~STREAM~~ NAME HERRINGTON	LOCATION CI-2 Curds Inlet
STATION # _____ RIVERMILE _____	STREAM CLASS
LAT See GPS LONG See GPS	RIVER BASIN
STORET #	AGENCY KU, Ramboll Environ
INVESTIGATORS K.C., H.T	
FORM COMPLETED BY AJS / MTS	DATE Oct 5, 2017 TIME 1145 AM (PM)
	REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☐ Yes ☒ No

Air Temperature 24 °C

Other _____

SITE LOCATION/MAP

CI-2

Draw a map of the site and indicate the areas sampled (or attach a photograph)

See CAP

AV001 ~~(0.5-2.0)~~ - CI2-171005

Vegetation ID MTS

AV-001 - CI2-171005

Sample collected along wadeable shoreline at depths ~ 0-2 ft.

~~STREAM~~ CHARACTERIZATION

Vegetation sample weight

Stream Subsystem
☐ Perennial ☐ Intermittent ☐ Tidal

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☐ Other _____

Stream Type
☐ Coldwater ☐ Warmwater

Catchment Area _____ km²

weight = 37.2 g

CI-2 (Page 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

MTS

CI-2

WATERSHED FEATURES

See CAP Maps

Predominant Surrounding Landuse
☐ Forest ☐ Commercial
☐ Field/Pasture ☐ Industrial
☐ Agricultural ☐ Other _____
☐ Residential Adjacent Ed Brown

Local Watershed NPS Pollution
☐ No evidence ☐ Some potential sources
☐ Obvious sources

Local Watershed Erosion
☐ None ☐ Moderate ☐ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
☐ Trees ☐ Shrubs ☐ Grasses ☐ Herbaceous

dominant species present _____

INSTREAM FEATURES

See CAP Maps

Estimated Reach Length _____m

Estimated Stream Width _____m

Sampling Reach Area _____m^2

Area in km^2 (m^2x1000) _____km^2

Estimated Stream Depth _____m

Surface Velocity (at thalweg) _____m/sec

Canopy Cover
☐ Partly open ☐ Partly shaded ☐ Shaded

High Water Mark _____m

Proportion of Reach Represented by Stream Morphology Types
☐ Riffle_____% ☐ Run_____%
☐ Pool_____%

Channelized ☐ Yes ☐ No

Dam Present ☐ Yes ☐ No

LARGE WOODY DEBRIS

LWD _____m^2 Qualitative LWD present at shore

Density of LWD _____m^2/km^2 **(LWD/ reach area)** some floating

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☒ Attached Algae

dominant species present periphyton + duckweed + submerged aquatic vegetation (SAV)

Portion of the reach with aquatic vegetation _____% ~~10-20%~~ 20% periphyton 30-40% SAV

WATER QUALITY

See Water Quality Logbook sheets

Temperature_____ ^{0}C

Specific Conductance_____

Dissolved Oxygen _____

pH _____

Turbidity _____

WQ Instrument Used _____

Water Odors
☒ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☐ Fishy ☐ Other_____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☒ None ☐ Other_____

Turbidity (if not measured)
☒ Clear ☐ Slightly turbid ☐ Turbid
☐ Opaque ☐ Stained ☐ Other_____

SEDIMENT/ SUBSTRATE

Odors
☒ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic ☐ None
☐ Other_____

Oils
☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
☐ Relict shells ☐ Other_____

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")	✓			
Cobble	64-256 mm (2.5"-10")	✓	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	✓			
Sand	0.06-2mm (gritty)	✓	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	✓			
Clay	< 0.004 mm (slick)	✓ MT			

CI-2 (Pg 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

MTS

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

LAKE

~~STREAM~~ NAME HERRINGTON	LOCATION CI-3 Curds Inlet
STATION #______ RIVERMILE______	STREAM CLASS
LAT See GPS LONG See GPS	RIVER BASIN
STORET #	AGENCY KU, Ramboll Environ
INVESTIGATORS	
FORM COMPLETED BY AJS / MTS	DATE ~~8~~ 10-5-17 TIME ~~4:40~~ 13:15 AM (PM) — REASON FOR SURVEY CAP

WEATHER CONDITIONS	**Now** / **Past 24 hours**: ☐ storm (heavy rain) ☐; ☐ rain (steady rain) ☐; ☐ showers (intermittent) ☐; ___%☐ %cloud cover ☐___%; ☒ clear/sunny ☒ — **Has there been a heavy rain in the last 7 days?** ☐ Yes ☒ No — **Air Temperature**____°C 70°s F — **Other**______
SITE LOCATION/MAP CI-3	**Draw a map of the site and indicate the areas sampled (or attach a photograph)** See Cap AV-001 ~~(0.5-2.0)~~ -CI3-171005 MTS. Vegetation ID AV-001-CI3-171005. Sample collected along shoreline at depths ~ 0-2ft that were wadeable. Mostly submerged aquatic vegetation.
~~**STREAM CHARACTERIZATION**~~ Vegetation Sample Weight	**Stream Subsystem** MTS ~~☐ Perennial ☐ Intermittent~~ ☐ Tidal — **Stream Type** ~~☐ Coldwater ☐ Warmwater~~ — **Stream Origin** ☐ Glacial ☐ Non-glacial montane ☐ Swamp and bog ☐ Spring-fed ☐ Mixture of origins ☐ Other______ — **Catchment Area**______km² Weight = 54.75g

CI-3 (Page 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

CI-3 IMB

WATERSHED FEATURES See CAD Maps	**Predominant Surrounding Landuse** ❑ Forest ❑ Commercial ❑ Field/Pasture ❑ Industrial ❑ Agricultural ❑ Other _____ ❑ Residential Adjacent EN Bown **Local Watershed NPS Pollution** ❑ No evidence ❑ Some potential sources ❑ Obvious sources **Local Watershed Erosion** ❑ None ❑ Moderate ❑ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ❑ Trees ❑ Shrubs ❑ Grasses ❑ Herbaceous **dominant species present** _____
INSTREAM FEATURES See CAD Maps	**Estimated Reach Length** _____m **Estimated Stream Width** _____m **Sampling Reach Area** _____m^2 **Area in km^2 (m^2x1000)** _____km^2 **Estimated Stream Depth** _____m **Surface Velocity (at thalweg)** _____m/sec **Canopy Cover** ❑ Partly open ❑ Partly shaded ❑ Shaded **High Water Mark** _____m **Proportion of Reach Represented by Stream Morphology Types** ❑ Riffle_____% ❑ Run_____% ❑ Pool_____% **Channelized** ❑ Yes ❑ No **Dam Present** ❑ Yes ❑ No
LARGE WOODY DEBRIS	**LWD** _____m^2 Qualitative LWD present at shoreline **Density of LWD** _____m^2/km^2 **(LWD/ reach area)**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ❑ Rooted emergent ☑ Rooted submergent ❑ Rooted floating ❑ Free floating ❑ Floating Algae ☑ Attached Algae **dominant species present** Periphyton (long filaments) (also periphyton) + fine filaments + submerged aquatic vegetation SAV **Portion of the reach with aquatic vegetation** ____% ~80-90% SAV
WATER QUALITY See Water Quality Logbook Sheets	**Temperature**_____^{0}C **Specific Conductance**_____ **Dissolved Oxygen** _____ **pH** _____ **Turbidity** _____ **WQ Instrument Used** _____ **Water Odors** ☑ Normal/None ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Fishy ❑ Other_____ **Water Surface Oils** ❑ Slick ❑ Sheen ❑ Globs ❑ Flecks ☑ None ❑ Other_____ **Turbidity (if not measured)** ☑ Clear ❑ Slightly turbid ❑ Turbid ❑ Opaque ❑ Stained ❑ Other_____
SEDIMENT/ SUBSTRATE	**Odors** ☑ Normal ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Anaerobic ❑ None ❑ Other_____ **Oils** ☑ Absent ❑ Slight ❑ Moderate ❑ Profuse **Deposits** ❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand ❑ Relict shells ❑ Other _____ **Looking at stones which are not deeply embedded, are the undersides black in color?** ❑ Yes ☑ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")	✓			
Cobble	64-256 mm (2.5"-10")	✓	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	✓			
Sand	0.06-2mm (gritty)	✓	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	✓			
Clay	< 0.004 mm (slick)				

CI-3 (Page 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

MTS

STREAM NAME CI-4	LOCATION Herrington Lake Curds Inlet
STATION # _____ RIVERMILE _____	STREAM CLASS
LAT See GPS LONG See GPS	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY MTS	DATE 10/5 TIME 4:40 AM (PM) REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
~~50~~ % ☐	%cloud cover	~~75~~ % ☐ MTS
☒	clear/sunny	☐

Has there been a heavy rain in the last 7 days? ☐ Yes ☒ No

Air Temperature 19 °C

Other _____

SITE LOCATION/MAP

CI-4

Draw a map of the site and indicate the areas sampled (or attach a photograph)

See CAP

AV-001 (~~0.5-2~~) MTS -CI4-171005

Vegetation ID

AV-001-CI4-171005

Sample collected by divers at approximately 12 feet depth and 20ft depth (periphyton + attached ~~algae~~) submerged aquatic vegetation (SAV)

~~STREAM~~ **CHARACTERIZATION**

Vegetation sample weight

Stream Subsystem ☐ Perennial ~~☐ Intermittent~~ ☐ Tidal MTS

Stream Type ☐ ~~Coldwater~~ ☐ ~~Warmwater~~

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

weight 65.8g

CI-4 (Page 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

MTS

CI-4

WATERSHED FEATURES See CAP Maps	**Predominant Surrounding Landuse** ❑ Forest ❑ Commercial ❑ Field/Pasture ❑ Industrial ❑ Agricultural ❑ Other ________ ❑ Residential Adjacent EW Brown **Local Watershed NPS Pollution** ❑ No evidence ❑ Some potential sources ❑ Obvious sources **Local Watershed Erosion** ❑ None ❑ Moderate ❑ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ❑ Trees ❑ Shrubs ❑ Grasses ❑ Herbaceous **dominant species present** ________
INSTREAM FEATURES See CAP Maps	**Estimated Reach Length** ____m **Estimated Stream Width** ____m **Sampling Reach Area** ____m^2 **Area in km^2 (m^2x1000)** ____km^2 **Estimated Stream Depth** ____m **Surface Velocity (at thalweg)** ____m/sec **Canopy Cover** ❑ Partly open ❑ Partly shaded ❑ Shaded **High Water Mark** ____m **Proportion of Reach Represented by Stream Morphology Types** ❑ Riffle ____% ❑ Run ____% ❑ Pool ____% **Channelized** ❑ Yes ❑ No **Dam Present** ❑ Yes ❑ No
LARGE WOODY DEBRIS	**LWD** ____m^2 **Density of LWD** ____m^2/km^2 (LWD/ reach area) LWD only in limited areas of shoreline
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ❑ Rooted emergent ☒ Rooted submergent ❑ Rooted floating ❑ Free floating ❑ Floating Algae ☒ Attached Algae **dominant species present** Periphyton - long, thick filaments - 75% periphyton **Portion of the reach with aquatic vegetation** Some submerged aquatic vegetation (SAV) - 25% SAV
WATER QUALITY See Water Quality Logbook + Sheets	**Temperature** ____ °C **Specific Conductance** ____ **Dissolved Oxygen** ____ **pH** ____ **Turbidity** ____ **WQ Instrument Used** ____ **Water Odors** ☒ Normal/None ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Fishy ❑ Other ____ **Water Surface Oils** ❑ Slick ❑ Sheen ❑ Globs ❑ Flecks ☒ None ❑ Other ____ **Turbidity (if not measured)** ☒ Clear ❑ Slightly turbid ❑ Turbid ❑ Opaque ❑ Stained ❑ Other ____
SEDIMENT/ SUBSTRATE	**Odors** ❑ Normal ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Anaerobic ❑ None ❑ Other ____ **Oils** ❑ Absent ❑ Slight ❑ Moderate ❑ Profuse **Deposits** ❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand ❑ Relict shells ❑ Other ____ **Looking at stones which are not deeply embedded, are the undersides black in color?** ❑ Yes ❑ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**
Bedrock		
Boulder	> 256 mm (10")	Rocky ledges ✓
Cobble	64-256 mm (2.5"-10")	✓
Gravel	2-64 mm (0.1"-2.5")	
Sand	0.06-2mm (gritty)	very deep
Silt	0.004-0.06 mm	
Clay	< 0.004 mm (slick)	

ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Characteristic**	**% Composition in Sampling Area**
Detritus	sticks, wood, coarse plant materials (CPOM)	
Muck-Mud	black, very fine organic (FPOM)	
Marl	grey, shell fragments	

CI-4 (Page 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ MS VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

STREAM NAME HQ Inlet	LOCATION Herrington Lake 2
STATION # _____ RIVERMILE _____	STREAM CLASS HQ Inlet 2
LAT GPS LONG GPS	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY MT Sorensen	DATE 10/6/17 TIME _____ AM PM — REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☐ Yes ☒ No

Air Temperature ___ °C 70's °F

Other _____

SITE LOCATION/MAP

CI-1

Draw a map of the site and indicate the areas sampled (or attach a photograph)

Sample ID
AV-001-HQ-171006
(Collected by divers)

Very fine periphyton attached to rocks

STREAM CHARACTERIZATION

Stream Subsystem ☐ Perennial ☐ Intermittent ☐ Tidal

Stream Type ☐ Coldwater ☐ Warmwater

Stream Origin
☒ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

Weight 11g

HQ Inlet (Pg 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

HQ Inlet

WATERSHED FEATURES

See CAP Maps

Predominant Surrounding Landuse
❑ Forest ❑ Commercial
❑ Field/Pasture ❑ Industrial
❑ Agricultural ❑ Other _____
❑ Residential

Local Watershed NPS Pollution
❑ No evidence ❑ Some potential sources
❑ Obvious sources

Local Watershed Erosion
❑ None ❑ Moderate ❑ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
❑ Trees ❑ Shrubs ❑ Grasses ❑ Herbaceous

dominant species present _____

INSTREAM FEATURES

See CAP Maps

Estimated Reach Length _____m
Estimated Stream Width _____m
Sampling Reach Area _____m^2
Area in km^2 (m^2x1000) _____km^2
Estimated Stream Depth _____m
Surface Velocity (at thalweg) _____m/sec

Canopy Cover
❑ Partly open ❑ Partly shaded ❑ Shaded

High Water Mark _____m

Proportion of Reach Represented by Stream Morphology Types
❑ Riffle_____% ❑ Run_____%
❑ Pool_____%

Channelized ❑ Yes ❑ No

Dam Present ❑ Yes ❑ No

LARGE WOODY DEBRIS

LWD _____m^2 LWD in Inlet along shoreline
Density of LWD _____m^2/km^2 **(LWD/ reach area)**

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
❑ Rooted emergent ❑ Rooted submergent ❑ Rooted floating ❑ Free floating
❑ Floating Algae ☒ Attached Algae

dominant species present 100% periphyton (Very fine attached to rocks)

Portion of the reach with aquatic vegetation ____%

WATER QUALITY

See Water Quality Sheets & Logbook

Temperature_____^{0}C
Specific Conductance_____
Dissolved Oxygen _____
pH _____
Turbidity _____
WQ Instrument Used _____

Water Odors
☒ Normal/None ❑ Sewage
❑ Petroleum ❑ Chemical
❑ Fishy ❑ Other_____

Water Surface Oils
❑ Slick ❑ Sheen ❑ Globs ❑ Flecks
☒ None ❑ Other_____

Turbidity (if not measured)
☒ Clear ❑ Slightly turbid ❑ Turbid
❑ Opaque ❑ Stained ❑ Other_____

SEDIMENT/ SUBSTRATE

Odors
❑ Normal ❑ Sewage ❑ Petroleum
❑ Chemical ❑ Anaerobic ❑ None
❑ Other_____

Oils
☒ Absent ❑ Slight ❑ Moderate ❑ Profuse

Deposits
❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand
❑ Relict shells ❑ Other_____

Looking at stones which are not deeply embedded, are the undersides black in color?
❑ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

HQ Inlet (Pg 2of2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET
MTS FOR HERRINGTON LAKE

STREAM NAME LHL1	LOCATION Herrington Lake LHL-1 ↩ Rock Run Embayment	
STATION # _____ RIVERMILE _____	STREAM CLASS N/A	
LAT GPS LONG GPS	RIVER BASIN Herrington Lake	
STORET # AV	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY Forrest Wade/MTS	DATE 10/12/17 TIME 0930 AM PM	REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
100% ☑	%cloud cover	~~☑ 100%~~ MTS
☐	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☐ Yes ☐ No

Air Temperature ____ °C High 69°F

Other _____

SITE LOCATION/MAP

LHL ~~A~~ 1

Draw a map of the site and indicate the areas sampled (or attach a photograph)

See CAP

~~AV-001 (0-1) CTI - 1710~~ MTS

LHL1

MTS

~~AV-001-CTI~~ MTS

~~Vegetation ID~~

AV-001 - LHL1 - 171012

This location in embayment had a ~~deep~~ shelf on one side with submerged aquatic vegetation (algae + periphyton). Collected by divers.

~~STREAM~~ CHARACTERIZATION

Vegetation Sample Weight

Stream Subsystem MTS
☐ Perennial ~~☐ Intermittent ☐ Tidal~~

Stream Type
☐ Coldwater ~~☐ Warmwater~~

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

Weight 96.5g

LHL-1 (Pg 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

LHL-1 MTS

WATERSHED FEATURES See CAP

Predominant Surrounding Landuse
☐ Forest ☐ Commercial
☐ Field/Pasture ☐ Industrial
☐ Agricultural ☐ Other _____
☒ Residential

Local Watershed NPS Pollution
☐ No evidence ☐ Some potential sources
☐ Obvious sources

Local Watershed Erosion
☐ None ☐ Moderate ☐ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
☐ Trees ☐ Shrubs ☐ Grasses ☐ Herbaceous

dominant species present _____

INSTREAM FEATURES See CAP MAP

Estimated Reach Length _____m
Estimated Stream Width _____m
Sampling Reach Area _____m^2
Area in km^2 (m^2x1000) _____km^2
Estimated Stream Depth _____m
Surface Velocity (at thalweg) _____m/sec

Canopy Cover
☐ Partly open ☐ Partly shaded ☐ Shaded

High Water Mark _____m

Proportion of Reach Represented by Stream Morphology Types
☐ Riffle _____% ☐ Run _____%
☐ Pool _____%

Channelized ☐ Yes ☐ No

Dam Present ☐ Yes ☐ No

LARGE WOODY DEBRIS

LWD _____m^2
Density of LWD _____m^2/km^2 (LWD/ reach area) Qualitative - Present along shoreline

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☒ Attached Algae

dominant species present 100% periphyton

Portion of the reach with aquatic vegetation _____%

WATER QUALITY See Water Quality Sheet

Temperature _____° C
Specific Conductance _____
Dissolved Oxygen _____
pH _____
Turbidity _____
WQ Instrument Used _____

Water Odors
☒ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☐ Fishy ☐ Other _____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☒ None ☐ Other _____

Turbidity (if not measured)
☒ Clear ☐ Slightly turbid ☐ Turbid
☐ Opaque ☐ Stained ☐ Other _____

SEDIMENT/ SUBSTRATE

Odors
☒ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic ☐ None
☐ Other _____

Oils
☐ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
☐ Relict shells ☐ Other _____

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	Sleepshell, little access to sediment
Boulder	> 256 mm (10")	Rocks Logs Vegetation			
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

LHL-1 (Pg 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

MTS

~~STREAM~~ NAME LHL-2	LOCATION LHL-2 (Near Dam)
STATION # _____ RIVERMILE _____	STREAM CLASS
LAT See GPS LONG See GPS	RIVER BASIN Herrington Lake
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY MT Sorensen	DATE 10/12 TIME _____ AM PM / REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
50 %	%cloud cover	☐ %
☐	clear/sunny	☐

Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No

Air Temperature ____ °C High 69°F

Other _____

SITE LOCATION/MAP

LHL-2

Draw a map of the site and indicate the areas sampled (or attach a photograph)

See CAP

~~AV-001 (0-1)~~

MTS
vegetation ID

AV-001-LHL-171012

Sample location near dam was difficult to access and obtain vegetation from wading. Divers collected attached algae & periphyton from depths > 10ft.

~~STREAM~~ CHARACTERIZATION

Vegetation sample weight

Stream Subsystem MTS
☐ Perennial ☐ ~~Intermittent~~ ☐ ~~Tidal~~

Stream Type
☐ Coldwater ☐ ~~Warmwater~~

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

Weight 50.2g

LHL-2 (Pg 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

LHL-2 MTS

WATERSHED FEATURES
See CAP

Predominant Surrounding Landuse
☐ Forest ☐ Commercial
☐ Field/Pasture ☐ Industrial
☐ Agricultural ☒ Other Dam
☐ Residential

Local Watershed NPS Pollution
☐ No evidence ☐ Some potential sources
☐ Obvious sources

Local Watershed Erosion
☐ None ☐ Moderate ☐ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
☐ Trees ☐ Shrubs ☐ Grasses ☐ Herbaceous

dominant species present _____

INSTREAM FEATURES
See CAP Maps

Estimated Reach Length _____m
Estimated Stream Width _____m
Sampling Reach Area _____m^2
Area in km^2 (m^2x1000) _____km^2
Estimated Stream Depth _____m
Surface Velocity (at thalweg) _____m/sec

Canopy Cover
☐ Partly open ☐ Partly shaded ☐ Shaded

High Water Mark _____m

Proportion of Reach Represented by Stream Morphology Types
☐ Riffle_____% ☐ Run_____%
☐ Pool_____%

Channelized ☐ Yes ☐ No

Dam Present ☒ Yes ☐ No

LARGE WOODY DEBRIS

LWD _____m^2
Density of LWD _____m^2/km^2 **(LWD/ reach area)**

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☒ Attached Algae

dominant species present Periphyton & attached algae → ~90% attached algae

Portion of the reach with aquatic vegetation ____% Shoreline ~~entire~~ & depth sampled

WATER QUALITY
See Water Quality Sheets + Logbook

Temperature_____^{0} C
Specific Conductance_____
Dissolved Oxygen _____
pH _____
Turbidity _____
WQ Instrument Used _____

Water Odors
☒ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☐ Fishy ☐ Other_____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☒ None ☐ Other_____

Turbidity (if not measured)
☒ Clear ☐ Slightly turbid ☐ Turbid
☐ Opaque ☐ Stained ☐ Other_____

SEDIMENT/ SUBSTRATE

Odors
☒ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic ☐ None
☐ Other_____

Oils
☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
☐ Relict shells ☐ Other_____

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		Shelf Near Dam	Detritus	sticks, wood, coarse plant materials (CPOM)	Collection at dam along shoreline
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

LHL-2 (Pg 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

WATER QUALITY AND VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

STREAM NAME LHL-3	LOCATION LHL-3	
STATION # _____ RIVERMILE _____	STREAM CLASS	
LAT See GPS LONG See GPS	RIVER BASIN Herrington Lake	
STORET #	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY MTSon	DATE 10/12 TIME _____ AM PM	REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
50 %	%cloud cover	☐ ____ %
☐	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No

Air Temperature _____ ° C

Other _____

SITE LOCATION/MAP

See CAP
LHL-3

Draw a map of the site and indicate the areas sampled (or attach a photograph)

Sample ID
AV-001 -LHL3 - 171012

Sample collected by waders along shoreline. Depth ~0-2ft.

STREAM CHARACTERIZATION

Sample Weight

Stream Subsystem ☐ Perennial ☐ Intermittent ☐ Tidal — MMS

Stream Type ☐ Coldwater ☐ Warmwater — MMS

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

Weight 28.7g

LHL-3 (Pg 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

LHL-3 MTS

WATERSHED FEATURES See CAP	**Predominant Surrounding Landuse** ❑ Forest ❑ Commercial ❑ Field/Pasture ❑ Industrial ❑ Agricultural ❑ Other _____ ❑ Residential **Local Watershed NPS Pollution** ❑ No evidence ❑ Some potential sources ❑ Obvious sources **Local Watershed Erosion** ❑ None ❑ Moderate ❑ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ❑ Trees ❑ Shrubs ❑ Grasses ❑ Herbaceous **dominant species present** _____
INSTREAM FEATURES See CAP maps	**Estimated Reach Length** _____m **Estimated Stream Width** _____m **Sampling Reach Area** _____m^2 **Area in km^2 (m^2x1000)** _____km^2 **Estimated Stream Depth** _____m **Surface Velocity (at thalweg)** _____m/sec **Canopy Cover** ❑ Partly open ❑ Partly shaded ❑ Shaded **High Water Mark** _____m **Proportion of Reach Represented by Stream Morphology Types** ❑ Riffle_____% ❑ Run_____% ❑ Pool_____% **Channelized** ❑ Yes ❑ No **Dam Present** ❑ Yes ❑ No
LARGE WOODY DEBRIS	**LWD** _____m^2 A little along shoreline **Density of LWD** _____m^2/km^2 **(LWD/ reach area)**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ❑ Rooted emergent ❑ Rooted submergent ❑ Rooted floating ❑ Free floating ❑ Floating Algae ☒ Attached Algae **dominant species present** Periphyton + attached algae (~50% algae + 50% periphyton) **Portion of the reach with aquatic vegetation** ____% Shoreline
WATER QUALITY See Water Quality sheets & Logbook	**Temperature**_____^{0}C **Specific Conductance**_____ **Dissolved Oxygen** _____ **pH** _____ **Turbidity** _____ **WQ Instrument Used** _____ **Water Odors** ☒ Normal/None ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Fishy ❑ Other_____ **Water Surface Oils** ❑ Slick ❑ Sheen ❑ Globs ❑ Flecks ☒ None ❑ Other_____ **Turbidity (if not measured)** ☒ Clear ❑ Slightly turbid ❑ Turbid ❑ Opaque ❑ Stained ❑ Other_____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Anaerobic ❑ None ❑ Other_____ **Oils** ☒ Absent ❑ Slight ❑ Moderate ❑ Profuse **Deposits** ❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand ❑ Relict shells ❑ Other_____ **Looking at stones which are not deeply embedded, are the undersides black in color?** ❑ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

LHL-3 (Pg 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

STREAM NAME LHL-4	LOCATION LHL-4
STATION # _____ RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN Herrington Lake
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY [signature]	DATE 10/12 TIME _____ AM (PM) / REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
90 %☒	%cloud cover	☐ ___%
☐	clear/sunny	☒ ~~??~~

Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No

Air Temperature_____ ° C

Other_____

SITE LOCATION/MAP

See CAP
LHL-4

Draw a map of the site and indicate the areas sampled (or attach a photograph)

Sample ID
AV-001-LHL3-171012
(Collected by divers)

~~STREAM~~ CHARACTERIZATION

Sample Weight

Stream Subsystem ☐ ~~Perennial~~ ☐ ~~Intermittent~~ ☐ Tidal MTS

Stream Type ☐ Coldwater ☐ ~~Warmwater~~

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other ☒

Catchment Area_____ km²

Weight >50g (with water)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

WATER QUALITY AND VEGETATION FIELD DATA SHEET

LHL-4

WATERSHED FEATURES See CAP	**Predominant Surrounding Landuse** ❑ Forest ❑ Commercial ❑ Field/Pasture ❑ Industrial ❑ Agricultural ❑ Other _____ ❑ Residential **Local Watershed NPS Pollution** ❑ No evidence ❑ Some potential sources ❑ Obvious sources **Local Watershed Erosion** ❑ None ❑ Moderate ❑ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ❑ Trees ❑ Shrubs ❑ Grasses ❑ Herbaceous **dominant species present** _____
INSTREAM FEATURES See CAP Maps	**Estimated Reach Length** _____m **Estimated Stream Width** _____m **Sampling Reach Area** _____m^2 **Area in km^2 (m^2x1000)** _____km^2 **Estimated Stream Depth** _____m **Surface Velocity (at thalweg)** _____m/sec **Canopy Cover** ❑ Partly open ❑ Partly shaded ❑ Shaded **High Water Mark** _____m **Proportion of Reach Represented by Stream Morphology Types** ❑ Riffle_____% ❑ Run_____% ❑ Pool_____% **Channelized** ❑ Yes ❑ No **Dam Present** ❑ Yes ❑ No
LARGE WOODY DEBRIS	**LWD** _____m^2 Some submerged along shoreline **Density of LWD** _____m^2/km^2 (LWD/ reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ❑ Rooted emergent ❑ Rooted submergent ❑ Rooted floating ❑ Free floating ❑ Floating Algae ☒ Attached Algae **dominant species present** Periphyton + attached algae **Portion of the reach with aquatic vegetation** ____% (80% algae, 20% periphyton)
WATER QUALITY See water Quality Logbook + Data Sheets	**Temperature**_____^{0} C **Specific Conductance**_____ **Dissolved Oxygen** _____ **pH** _____ **Turbidity** _____ **WQ Instrument Used** _____ **Water Odors** ☒ Normal/None ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Fishy ❑ Other_____ **Water Surface Oils** ❑ Slick ❑ Sheen ❑ Globs ❑ Flecks ☒ None ❑ Other_____ **Turbidity (if not measured)** ☒ Clear ❑ Slightly turbid ❑ Turbid ❑ Opaque ❑ Stained ❑ Other_____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Anaerobic ❑ None ❑ Other_____ **Oils** ☒ Absent ❑ Slight ❑ Moderate ❑ Profuse **Deposits** ❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand ❑ Relict shells ❑ Other_____ **Looking at stones which are not deeply embedded, are the undersides black in color?** ❑ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

LHL-4 (Page 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

STREAM NAME LHL5	LOCATION Herrington Lake	
STATION # _____ RIVERMILE _____	STREAM CLASS Mallard Cove / Cave Run	
LAT GPS LONG GPS	RIVER BASIN Herrington Lake	
STORET # AV	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY M.T. Sorensen	DATE 10/12/17 TIME 10:30 AM PM	REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
100 % ☒	%cloud cover	~~☐ 100%~~
☐	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No

Air Temperature _____ ° C

Other _____

SITE LOCATION/MAP

See CAP
LHL-5

Draw a map of the site and indicate the areas sampled (or attach a photograph)

Sample ID
AV-001-LHL5-171012
(Collected by divers)

STREAM CHARACTERIZATION

Stream Subsystem MTS ☐ ~~Perennial~~ ☐ ~~Intermittent~~ ☐ ~~Tidal~~

Stream Type ☐ ~~Coldwater~~ ☐ ~~Warmwater~~

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

Weight 40.79

LHL5 (Pg 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

WATER QUALITY AND VEGETATION FIELD DATA SHEET

LHL-5

WATERSHED FEATURES

See CAP

Predominant Surrounding Landuse
❑ Forest ❑ Commercial
❑ Field/Pasture ❑ Industrial
❑ Agricultural ❑ Other _____
❑ Residential

Local Watershed NPS Pollution
❑ No evidence ❑ Some potential sources
❑ Obvious sources

Local Watershed Erosion
❑ None ❑ Moderate ❑ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
❑ Trees ❑ Shrubs ❑ Grasses ❑ Herbaceous

dominant species present _____

INSTREAM FEATURES

See CAP Maps

Estimated Reach Length _____m

Estimated Stream Width _____m

Sampling Reach Area _____m^2

Area in km^2 (m^2x1000) _____km^2

Estimated Stream Depth _____m

Surface Velocity (at thalweg) _____m/sec

Canopy Cover
❑ Partly open ❑ Partly shaded ❑ Shaded

High Water Mark _____m

Proportion of Reach Represented by Stream Morphology Types
❑ Riffle_____% ❑ Run_____%
❑ Pool_____%

Channelized ❑ Yes ❑ No

Dam Present ❑ Yes ❑ No

LARGE WOODY DEBRIS

LWD _____m^2

Density of LWD _____m^2/km^2 **(LWD/ reach area)**

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
❑ Rooted emergent ❑ Rooted submergent ❑ Rooted floating ❑ Free floating
❑ Floating Algae ☒ Attached Algae

dominant species present 75% submerged algae + 25% periphyton

Portion of the reach with aquatic vegetation ____%

WATER QUALITY

See Water Quality Sheets

Temperature_____^{0} C

Specific Conductance_____

Dissolved Oxygen _____

pH _____

Turbidity _____

WQ Instrument Used _____

Water Odors
☒ Normal/None ❑ Sewage
❑ Petroleum ❑ Chemical
❑ Fishy ❑ Other_____

Water Surface Oils
❑ Slick ❑ Sheen ❑ Globs ❑ Flecks
☒ None ❑ Other_____

Turbidity (if not measured)
☒ Clear ❑ Slightly turbid ❑ Turbid
❑ Opaque ❑ Stained ❑ Other_____

SEDIMENT/ SUBSTRATE

Odors
☒ Normal ❑ Sewage ❑ Petroleum
❑ Chemical ❑ Anaerobic ❑ None
❑ Other_____

Oils
☒ Absent ❑ Slight ❑ Moderate ❑ Profuse

Deposits
❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand
❑ Relict shells ❑ Other_____

Looking at stones which are not deeply embedded, are the undersides black in color?
❑ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

LHL-5 (Pg 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

STREAM NAME LHL-6	LOCATION	
STATION # _____ RIVERMILE _____	STREAM CLASS	
LAT GPS LONG GPS	RIVER BASIN	
STORET # AV	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY MT Sorensen	DATE 10/12/17 AM PM TIME _____	REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☐	clear/sunny	☐

Has there been a heavy rain in the last 7 days? ☐ Yes ☐ No

Air Temperature ____ ° C

Other _____

SITE LOCATION/MAP

See CAP
LHL-5

Draw a map of the site and indicate the areas sampled (or attach a photograph)

Sample ID

AV-001-LHL5 -17/10/12
(Collected by divers)

STREAM CHARACTERIZATION

Stream Subsystem
☐ Perennial ~~☐ Intermittent ☐ Tidal~~

Stream Type
☐ Coldwater ~~☐ Warmwater~~

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

Weight 32.5g

LHL-6 (Page 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET

LHL-6

WATERSHED FEATURES See CAP	**Predominant Surrounding Landuse** ❑ Forest ❑ Commercial ❑ Field/Pasture ❑ Industrial ❑ Agricultural ❑ Other _____ ❑ Residential **Local Watershed NPS Pollution** ❑ No evidence ❑ Some potential sources ❑ Obvious sources **Local Watershed Erosion** ❑ None ❑ Moderate ❑ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ❑ Trees ❑ Shrubs ❑ Grasses ❑ Herbaceous **dominant species present** _____
INSTREAM FEATURES See CAP Maps	**Estimated Reach Length** _____m **Estimated Stream Width** _____m **Sampling Reach Area** _____m^2 **Area in km^2 (m^2x1000)** _____km^2 **Estimated Stream Depth** _____m **Surface Velocity (at thalweg)** _____m/sec **Canopy Cover** ❑ Partly open ❑ Partly shaded ❑ Shaded **High Water Mark** _____m **Proportion of Reach Represented by Stream Morphology Types** ❑ Riffle_____% ❑ Run_____% ❑ Pool_____% **Channelized** ❑ Yes ❑ No **Dam Present** ❑ Yes ❑ No
LARGE WOODY DEBRIS	**LWD** _____m^2 **Density of LWD** _____m^2/km^2 **(LWD/ reach area)**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ❑ Rooted emergent ❑ Rooted submergent ❑ Rooted floating ❑ Free floating ❑ Floating Algae ☒ Attached Algae **dominant species present** Periphyton + algae - attached **Portion of the reach with aquatic vegetation** _____%
WATER QUALITY	**Temperature**_____^{0}C **Specific Conductance**_____ **Dissolved Oxygen** _____ **pH** _____ **Turbidity** _____ **WQ Instrument Used** _____ **Water Odors** ☒ Normal/None ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Fishy ❑ Other_____ **Water Surface Oils** ❑ Slick ❑ Sheen ❑ Globs ❑ Flecks ☒ None ❑ Other_____ **Turbidity (if not measured)** ☒ Clear ❑ Slightly turbid ❑ Turbid ❑ Opaque ❑ Stained ❑ Other_____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ❑ Sewage ❑ Petroleum ❑ Chemical ❑ Anaerobic ❑ None ❑ Other_____ **Oils** ☒ Absent ❑ Slight ❑ Moderate ❑ Profuse **Deposits** ❑ Sludge ❑ Sawdust ❑ Paper fiber ❑ Sand ❑ Relict shells ❑ Other_____ **Looking at stones which are not deeply embedded, are the undersides black in color?** ❑ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

LHL-6 (Pg 2 of 2)

3

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

~~WATER QUALITY AND~~ VEGETATION FIELD DATA SHEET FOR HERRINGTON LAKE

STREAM NAME ~~1-2 MTS~~ Dix River	LOCATION ~~Curtis Inlet~~ Dix River MTS	
STATION # _____ RIVERMILE _____	STREAM CLASS NA	
LAT GPS LONG GPS	RIVER BASIN Herrington Lake - Downstream from dam	
STORET #	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY MTSorensen	DATE 10/02/17 TIME _____ AM PM	REASON FOR SURVEY CAP

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☐ Yes ☒ No

Air Temperature ____ °C 70s

Other _____

SITE LOCATION/MAP

Dix River

Draw a map of the site and indicate the areas sampled (or attach a photograph)

Sample ID

AV-001-DR-171007

Sample collected from Wadeable area near spillway

STREAM CHARACTERIZATION

Stream Subsystem ☐ Perennial ☐ Intermittent ☐ Tidal

Stream Type ☐ Coldwater ☐ Warmwater

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☐ Other _____

Catchment Area _____ km²

Weight 31.39

Dix River (Pg 1 of 2)

Source: Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

WATER QUALITY AND VEGETATION FIELD DATA SHEET

WATERSHED FEATURES
See CAP Maps

Predominant Surrounding Landuse
☐ Forest ☐ Commercial
☐ Field/Pasture ☐ Industrial
☐ Agricultural ☐ Other _____
☐ Residential

Local Watershed NPS Pollution
☐ No evidence ☐ Some potential sources
☐ Obvious sources

Local Watershed Erosion
☐ None ☐ Moderate ☐ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
☐ Trees ☐ Shrubs ☐ Grasses ☐ Herbaceous

dominant species present _____

INSTREAM FEATURES
See CAP Maps

Estimated Reach Length _____m

Estimated Stream Width _____m

Sampling Reach Area _____m^2

Area in km^2 (m^2x1000) _____km^2

Estimated Stream Depth _____m

Surface Velocity (at thalweg) _____m/sec

Canopy Cover
☐ Partly open ☐ Partly shaded ☐ Shaded

High Water Mark _____m

Proportion of Reach Represented by Stream Morphology Types
☐ Riffle _____% ☐ Run _____%
☐ Pool _____%

Channelized ☐ Yes ☐ No

Dam Present ☐ Yes ☐ No

LARGE WOODY DEBRIS

LWD _____m^2

Density of LWD _____m^2/km^2 **(LWD/ reach area)**

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☒ Attached Algae

dominant species present Periphyton - 100%

Portion of the reach with aquatic vegetation ____%

WATER QUALITY
See water quality sheets + Logbook

Temperature _____ ° C

Specific Conductance _____

Dissolved Oxygen _____

pH _____

Turbidity _____

WQ Instrument Used _____

Water Odors
☒ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☐ Fishy ☐ Other _____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☒ None ☐ Other _____

Turbidity (if not measured)
☒ Clear ☐ Slightly turbid ☐ Turbid
☐ Opaque ☐ Stained ☐ Other _____

SEDIMENT/ SUBSTRATE

Odors
☒ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic ☐ None
☐ Other _____

Oils
☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
☐ Relict shells ☐ Other _____

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☒ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

Dix River (Pg 2 of 2)

Source: Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets - Form 1

APPENDIX D: SAMPLE COLLECTION FIELD DATA SHEETS

Appendix D6: Aquatic Invertebrates Field Data Sheets (Phase I)

3.13
8.47

Page 1 of 1

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID CI-1

DATE Oct 4, 2017	**TIME** 1130	☑ Grab sample O Hester Dendy
FORM COMPLETED BY: AJS / MTSorensen		Sample Volume: NA 5.34 g Weight
OTHER: SampleID AI-001-CI-171004		Depuration Time 24 hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- O Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- ☑ Clear/Sunny

~~Inches of~~ rain in last 24 Hours ? No

Other:

OBSERVATIONS

Check all that apply

FLOW

- O Dry
- O Stagnant/Still
- O Low
- ☑ Normal
- O High
- O Flood over banks

WATER CLARITY

- O Clear/Transparent
- ☑ Cloudy/Slightly Turbid
- O Opaque/Very Turbid
- O Other: at outfall mixing

WATER COLOR

- O None
- O Brown/Muddy
- O Green
- O Milky/White
- O Tannic/Black
- ☑ Other: Slightly Turbid at outfall mixing

WATER SURFACE

- O Clear/Sunny
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- ☑ Some foam (very limited)
- O More than 3" foam

Color: Pale Yellow

Color:

WATER ODOR

- ☑ Natural/None
- O Fishy
- O Sewage
- O Gasoline
- O Chlorine
- O Sulfur
- O Other

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

R Stonefly Nymphs	Net Spinning Caddisflies	R Midge Fly Larvae
Mayfly Nymphs	Dobsonfly/Helgrammite	Black Fly Larvae
Water Penny Larvae	C Dragonfly & Damselfly	C Lunged Snails
Riffle Beetles	Crayfish	Aquatic Worms
Aquatic Snipe Flies	Crane Flies	R Leeches
R Caddisflies	Aquatic Sow Bugs	
R Gilled Snails	Scud	
	Clams & Mussels	

Sample weight ~~tare~~ 14.7 g

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID CI-2

DATE	TIME	
10-05-17		O Grab sample O Hester Dendy
FORM COMPLETED BY: MTSorensen		Sample Volume: 11g
OTHER: Sample ID-A1-001-C12-171005		Depuration Time 24 hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- O Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- O Clear/Sunny

~~Inches of~~ rain in last 24 Hours ? NO

Other:

OBSERVATIONS

Check all that apply

FLOW	WATER CLARITY	WATER COLOR
O Dry	O Clear/Transparent	O None
O Stagnant/Still	O Cloudy/Slightly Turbid	O Brown/Muddy
O Low	O Opaque/Very Turbid	O Green
O Normal	O Other:	O Milky/White
O High		O Tannic/Black
O Flood over banks		O Other:

WATER SURFACE

- O ~~Clear/Sunny~~
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

O Natural/None	O Gasoline	O Other
O Fishy	O Chlorine	
O Sewage	O Sulfur	

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D
X = not found, R (rare)=1-9, C (common)=10-99
and D (dominant)=100 individuals or greater

Stonefly Nymphs	Net Spinning Caddisflies	Midge Fly Larvae
Mayfly Nymphs	Dobsonfly/Helgrammite	Black Fly Larvae
Water Penny Larvae	Dragonfly & Damselfly	Lunged Snails
Riffle Beetles	R Crayfish (2)	Aquatic Worms
Aquatic Snipe Flies	Crane Flies	Leeches
Caddisflies	Aquatic Sow Bugs	
Gilled Snails	Scud	
	Clams & Mussels	

Weight 11g

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID C13

DATE	TIME	
10-05-17		✓ Grab sample O Hester Dendy
FORM COMPLETED BY: MT Sorensen		Sample Volume: 28.479
OTHER: Sample ID - A1-001-C13-171005		Depuration Time 24 hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- O Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- ✓ Clear/Sunny

~~Inches of~~ rain in last 24 Hours ? No

Other:

OBSERVATIONS

Check all that apply

FLOW	WATER CLARITY	WATER COLOR
O Dry	✓ Clear/Transparent	✓ None
O Stagnant/Still	O Cloudy/Slightly Turbid	O Brown/Muddy
O Low	O Opaque/Very Turbid	O Green
✓ Normal	O Other:	O Milky/White
O High		O Tannic/Black
O Flood over banks		O Other:

WATER SURFACE

- ✓ Clear/~~Sunny~~
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

✓ Natural/None	O Gasoline	O Other
O Fishy	O Chlorine	
O Sewage	O Sulfur	

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

Stonefly Nymphs	Net Spinning Caddisflies	Midge Fly Larvae
C Mayfly Nymphs (160)	Dobsonfly/Helgrammite	Black Fly Larvae
Water Penny Larvae	Dragonfly & Damselfly	Lunged Snails
Riffle Beetles	R Crayfish (4)	Aquatic Worms
Aquatic Snipe Flies	Crane Flies	Leeches
Caddisflies	Aquatic Sow Bugs	
C Gilled Snails (13)	Scud	
	Clams & ~~Mussels~~	

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID: C14

DATE: 10-05-17

TIME:

Ø Grab sample
O Hester Dendy

FORM COMPLETED BY: MTSorensen

Sample Volume: 14.49

OTHER: Sample ID - A1-001-C14-171005

Depuration Time: 24 hrs

WEATHER

Present conditions (check all that apply)

O Heavy Rain
O Overcast
O Steady Rain
O Partly Cloudy
O Intermittent Rain
Ø Clear/Sunny

Inches of rain in last 24 Hours ?

NO

Other:

OBSERVATIONS

Check all that apply

FLOW	WATER CLARITY	WATER COLOR
O Dry	Ø Clear/Transparent	Ø None
O Stagnant/Still	O Cloudy/Slightly Turbid	O Brown/Muddy
O Low	O Opaque/Very Turbid	O Green
Ø Normal	O Other:	O Milky/White
O High		O Tannic/Black
O Flood over banks		O Other:

WATER SURFACE

Ø Clear/Sunny
O Oily sheen that breaks when disturbed
O Oily sheen that does not break when disturbed
O Some foam — Color
O More than 3" foam — Color

WATER ODOR

Ø Natural/None	O Gasoline	O Other
O Fishy	O Chlorine	
O Sewage	O Sulfur	

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D
X = not found, R (rare)=1-9, C (common)=10-99
and D (dominant)=100 individuals or greater

[ ] Stonefly Nymphs	[ ] Net Spinning Caddisflies	[ ] Midge Fly Larvae
[ ] Mayfly Nymphs	[ ] Dobsonfly/Helgrammite	[ ] Black Fly Larvae
[ ] Water Penny Larvae	[ ] Dragonfly & Damselfly	[ ] Lunged Snails
[ ] Riffle Beetles	[R] Crayfish (2)	[ ] Aquatic Worms
[ ] Aquatic Snipe Flies	[ ] Crane Flies	[ ] Leeches
[ ] Caddisflies	[ ] Aquatic Sow Bugs	
[ ] Gilled Snails	[ ] Scud	
	[ ] Clams & Mussels	

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID HQ INLET

DATE	TIME	
10-6-17		⊘ Grab sample O Hester Dendy
FORM COMPLETED BY: Raleigh / MT Sorensen		Sample Volume: 119
OTHER: Sample ID AV-001-~~EIZ-171005~~ HQ-171006		Depuration Time 24 hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- O Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- ⊘ Clear/Sunny

Inches of rain in last 24 Hours

Other:

OBSERVATIONS

Check all that apply

FLOW

- O Dry
- O Stagnant/Still
- O Low
- ⊘ Normal
- O High
- O Flood over banks

WATER CLARITY

- ⊘ Clear/Transparent
- O Cloudy/Slightly Turbid
- O Opaque/Very Turbid
- O Other:

WATER COLOR

- ⊘ None
- O Brown/Muddy
- O Green
- O Milky/White
- O Tannic/Black
- O Other:

WATER SURFACE

- ⊘ ~~Clear/Sunny~~ MTS
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

- ⊘ ~~Natural/None~~
- O Fishy
- O Sewage
- O Gasoline
- O Chlorine
- O Sulfur
- O Other

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

	Stonefly Nymphs		Net Spinning Caddisflies	R	Midge Fly Larvae
C	Mayfly Nymphs		Dobsonfly/Helgrammite		Black Fly Larvae
	Water Penny Larvae	R	Dragonfly & Damselfly		Lunged Snails
	Riffle Beetles		Crayfish		Aquatic Worms
	Aquatic Snipe Flies		Crane Flies		Leeches
	Caddisflies		Aquatic Sow Bugs		
C	Gilled Snails		Scud		
			Clams & Mussels		

Sample Weight 119

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID LHL1

DATE	**TIME**	
10-12-17	9:30	☑ Grab sample O Hester Dendy
FORM COMPLETED BY: BG		Sample Volume: 28.29
OTHER: Sample ID A1-001-LHL1-171012		Depuration Time 24 hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- ☑ Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- O Clear/Sunny

~~Inches of~~ rain in last 24 Hours ? Yes

Other:

OBSERVATIONS

Check all that apply

FLOW

- O Dry
- O Stagnant/Still
- O Low
- ☑ Normal
- O High
- O Flood over banks

WATER CLARITY

- ☑ Clear/Transparent
- O Cloudy/Slightly Turbid
- O Opaque/Very Turbid
- O Other:

WATER COLOR

- ☑ None
- O Brown/Muddy
- O Green
- O Milky/White
- O Tannic/Black
- O Other:

WATER SURFACE

- ☑ Clear/~~Sunny~~
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

- ☑ Natural/None
- O Fishy
- O Sewage
- O Gasoline
- O Chlorine
- O Sulfur
- O Other

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

[ ] Stonefly Nymphs	[ ] Net Spinning Caddisflies	[ ] Midge Fly Larvae
[R] Mayfly Nymphs (2)	[ ] Dobsonfly/Helgrammite	[ ] Black Fly Larvae
[ ] Water Penny Larvae	[ ] Dragonfly & Damselfly	[ ] Lunged Snails
[ ] Riffle Beetles	[R] Crayfish (4)	[ ] Aquatic Worms
[ ] Aquatic Snipe Flies	[ ] Crane Flies	[ ] Leeches
[ ] Caddisflies	[ ] Aquatic Sow Bugs	
[C] Gilled Snails (15)	[ ] Scud	
	[ ] Clams ~~& Mussels~~	

Weight 28.29

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID: LHL2

DATE	TIME	
10-12-17	1100	⊘ Grab sample O Hester Dendy
FORM COMPLETED BY: FMW / MTSorensen		Sample Volume: 8.19
OTHER: Sample ID - A1-001-LHL2-171012		Depuration Time

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- ⊘ Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- O Clear/Sunny

~~Inches of~~ rain in last 24 Hours ?

Yes

Other:

OBSERVATIONS

Check all that apply

FLOW

- O Dry
- O Stagnant/Still
- O Low
- ⊘ Normal
- O High
- O Flood over banks

WATER CLARITY

- ⊘ Clear/Transparent
- O Cloudy/Slightly Turbid
- O Opaque/Very Turbid
- O Other:

WATER COLOR

- ⊘ None
- O Brown/Muddy
- O Green
- O Milky/White
- O Tannic/Black
- O Other:

WATER SURFACE

- ⊘ Clear/~~Sunny~~
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

O Natural/None	O Gasoline	O Other
O Fishy	O Chlorine	
O Sewage	O Sulfur	

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D
X = not found, R (rare)=1-9, C (common)=10-99
and D (dominant)=100 individuals or greater

[ ] Stonefly Nymphs	[ ] Net Spinning Caddisflies	[ ] Midge Fly Larvae
[C] Mayfly Nymphs	[ ] Dobsonfly/Helgrammite	[ ] Black Fly Larvae
[ ] Water Penny Larvae	[ ] Dragonfly & Damselfly	[ ] Lunged Snails
[ ] Riffle Beetles	[R] Crayfish (2)	[R] Aquatic Worms
[ ] Aquatic Snipe Flies	[ ] Crane Flies	[R] Leeches
[ ] Caddisflies	[ ] Aquatic Sow Bugs	
[R] Gilled Snails	[ ] Scud	Weight 8.19
	[ ] Clams & ~~Mussels~~	

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID: LHL3

DATE	TIME	
10-12-17	1230	⊙ Grab sample O Hester Dendy
FORM COMPLETED BY: FMW/MTSorensen		Sample Volume: 23.69
OTHER: Sample ID - A1-001-LHL3		Depuration Time: 24 hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- ⊙ Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- O Clear/Sunny

~~Inches of~~ rain in last 24 Hours? Yes

Other:

OBSERVATIONS

Check all that apply

FLOW

- O Dry
- O Stagnant/Still
- O Low
- ⊙ Normal
- O High
- O Flood over banks

WATER CLARITY

- ⊙ Clear/Transparent
- O Cloudy/Slightly Turbid
- O Opaque/Very Turbid
- O Other:

WATER COLOR

- ⊙ None
- O Brown/Muddy
- O Green
- O Milky/White
- O Tannic/Black
- O Other:

WATER SURFACE

- ⊙ Clear/~~Sunny~~ MTS
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

- ⊙ Natural/None
- O Fishy
- O Sewage
- O Gasoline
- O Chlorine
- O Sulfur
- O Other

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

R	Stonefly Nymphs		Net Spinning Caddisflies		Midge Fly Larvae
C	Mayfly Nymphs		Dobsonfly/Helgrammite		Black Fly Larvae
	Water Penny Larvae		Dragonfly & Damselfly		Lunged Snails
	Riffle Beetles	R	Crayfish (2)		Aquatic Worms
	Aquatic Snipe Flies		Crane Flies		Leeches
	Caddisflies		Aquatic Sow Bugs		
R	Gilled Snails		Scud		
			Clams & ~~Mussels~~		

Weight - 23.6 g

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID LHL4

DATE	TIME	
10-12-17	1330	☑ Grab sample O Hester Dendy
FORM COMPLETED BY: BG		Sample Volume: 25.69
OTHER: Sample ID A1-001-171012		Depuration Time 24hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- ☑ Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- O Clear/Sunny

~~Inches of rain in last 24 Hours~~ Rain in last 24 hrs? Yes

Other:

OBSERVATIONS

Check all that apply

FLOW	WATER CLARITY	WATER COLOR
O Dry	☑ Clear/Transparent	☑ None
O Stagnant/Still	O Cloudy/Slightly Turbid	O Brown/Muddy
O Low	O Opaque/Very Turbid	O Green
☑ Normal	O Other:	O Milky/White
O High		O Tannic/Black
O Flood over banks		O Other:

WATER SURFACE

- ☑ Clear/~~Sunny~~
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

☑ Natural/None	O Gasoline	O Other
O Fishy	O Chlorine	
O Sewage	O Sulfur	

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

[ ] Stonefly Nymphs	[ ] Net Spinning Caddisflies	[ ] Midge Fly Larvae
[C] Mayfly Nymphs (35)	[ ] Dobsonfly/Helgrammite	[ ] Black Fly Larvae
[ ] Water Penny Larvae	[ ] Dragonfly & Damselfly	[ ] Lunged Snails
[ ] Riffle Beetles	[R] Crayfish (2)	[ ] Aquatic Worms
[ ] Aquatic Snipe Flies	[ ] Crane Flies	[ ] Leeches
[ ] Caddisflies	[ ] Aquatic Sow Bugs	
[ ] Gilled Snails	[ ] Scud	
	[ ] Clams ~~& Mussels~~	

Weight 25.6g

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID LHL5

DATE	TIME	
10-12-17	1530	☑ Grab sample O Hester Dendy
FORM COMPLETED BY: BG		Sample Volume: Weight 7.95 g
OTHER:		Depuration Time

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- ☑ Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- O Clear/Sunny

~~Inches of~~ rain in last 24 Hours? Yes

Other:

OBSERVATIONS

Check all that apply

FLOW

- O Dry
- O Stagnant/Still
- O Low
- ☑ Normal
- O High
- O Flood over banks

WATER CLARITY

- ☑ Clear/Transparent
- O Cloudy/Slightly Turbid
- O Opaque/Very Turbid
- O Other:

WATER COLOR

- ☑ None
- O Brown/Muddy
- O Green
- O Milky/White
- O Tannic/Black
- O Other:

WATER SURFACE

- ☑ Clear/~~Sunny~~
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

- ☑ Natural/None
- O Fishy
- O Sewage
- O Gasoline
- O Chlorine
- O Sulfur
- O Other

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

[ ] Stonefly Nymphs	[ ] Net Spinning Caddisflies	[ ] Midge Fly Larvae
[C] Mayfly Nymphs ~~(70)~~ (200)	[ ] Dobsonfly/Helgrammite	[ ] Black Fly Larvae
[ ] Water Penny Larvae	[ ] Dragonfly & Damselfly	[ ] Lunged Snails
[ ] Riffle Beetles	[R] Crayfish (2)	[ ] Aquatic Worms
[ ] Aquatic Snipe Flies	[ ] Crane Flies	[ ] Leeches
[ ] Caddisflies (100)	[ ] Aquatic Sow Bugs	
[ ] Gilled Snails	[ ] Scud	
	[ ] Clams & Mussels	

Weight 7.95 g

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID LHL6

DATE 10-12-17	**TIME** 1620	~~O~~ Grab sample O Hester Dendy
FORM COMPLETED BY: FMW		Sample Volume: 18.5g
OTHER: Sample ID - OA1-001-LHL6-171012		Depuration Time 24 hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- ~~O~~ Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- O Clear/Sunny

~~Inches of~~ rain in last 24 Hours: Yes

Other:

OBSERVATIONS

Check all that apply

FLOW	WATER CLARITY	WATER COLOR
O Dry	~~O~~ Clear/Transparent	~~O~~ None
O Stagnant/Still	O Cloudy/Slightly Turbid	O Brown/Muddy
O Low	O Opaque/Very Turbid	O Green
~~O~~ Normal	O Other:	O Milky/White
O High		O Tannic/Black
O Flood over banks		O Other:

WATER SURFACE

- ~~O~~ Clear/~~Sunny~~
- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

~~O~~ Natural/None	O Gasoline	O Other
O Fishy	O Chlorine	
O Sewage	O Sulfur	

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D
X = not found, R (rare)=1-9, C (common)=10-99
and D (dominant)=100 individuals or greater

[ ] Stonefly Nymphs	[R] Net Spinning Caddisflies (2)	[ ] Midge Fly Larvae
[D] Mayfly Nymphs (120)	[R] Dobsonfly/Helgrammite (2)	[ ] Black Fly Larvae
[ ] Water Penny Larvae	[ ] Dragonfly & Damselfly	[ ] Lunged Snails
[ ] Riffle Beetles	[R] Crayfish (1)	[ ] Aquatic Worms
[ ] Aquatic Snipe Flies	[ ] Crane Flies	[ ] Leeches
[ ] Caddisflies	[ ] Aquatic Sow Bugs	
[R] Gilled Snails (3)	[ ] Scud	
	[ ] Clams ~~& Mussels~~	

Weight 18.5g

HERRINGTON LAKE MACROINVERTEBRATE SAMPLING FORM

SITE

HERRINGTON LAKE TRANSECT ID DIX ~~RUD~~ River

DATE	TIME	
10-7-17		O Grab sample O Hester Dendy
FORM COMPLETED BY: MTSorensen / BG		Sample Volume: 10.96g
OTHER: Sample ID-A1-001-DR-171007		Depuration Time 24hrs

WEATHER

Present conditions (check all that apply)

- O Heavy Rain
- O Overcast
- O Steady Rain
- O Partly Cloudy
- O Intermittent Rain
- Ø ~~Clear/Sunny~~

~~Inches of~~ rain in last 24 Hours ? No

Other:

OBSERVATIONS

Check all that apply

FLOW	WATER CLARITY	WATER COLOR
O Dry	Ø ~~Clear/Transparent~~	Ø ~~None~~
O Stagnant/Still	O Cloudy/Slightly Turbid	O Brown/Muddy
O Low	O Opaque/Very Turbid	O Green
Ø ~~Normal~~	O Other:	O Milky/White
O High		O Tannic/Black
O Flood over banks		O Other:

WATER SURFACE

Ø ~~Clear/Sunny~~

- O Oily sheen that breaks when disturbed
- O Oily sheen that does not break when disturbed
- O Some foam — Color
- O More than 3" foam — Color

WATER ODOR

Ø ~~Natural/None~~	O Gasoline	O Other
O Fishy	O Chlorine	
O Sewage	O Sulfur	

TAXA GROUPS

MARK THESE TAXA AS X, R, C, or D

X = not found, R (rare)=1-9, C (common)=10-99 and D (dominant)=100 individuals or greater

[ ] Stonefly Nymphs	[ ] Net Spinning Caddisflies	[ ] Midge Fly Larvae
[ ] Mayfly Nymphs	[ ] Dobsonfly/Helgrammite	[ ] Black Fly Larvae
[ ] Water Penny Larvae	[ ] Dragonfly & Damselfly	[R] Lunged Snails
[ ] Riffle Beetles	[ ] Crayfish	[ ] Aquatic Worms
[ ] Aquatic Snipe Flies	[ ] Crane Flies	[R] Leeches
[ ] Caddisflies	[R] Aquatic Sow Bugs	
[ ] Gilled Snails	[R] Scud	
	[ ] Clams & Mussels	

Weight 10.96g