APPENDIX A

State and Federal Permits for 2016 Biota Collection

STATE OF MAINE
DEPARTMENT OF INLAND FISHERIES AND WILDLIFE
Wildlife Division
650 State Street
Bangor, Maine 04401
Phone (207) 941-4466 Fax (207) 941-4450

WILDLIFE SCIENTIFIC COLLECTION PERMIT

Old License #: AMENDED

Permit #: 2016 - 494

ISSUED TO: Amec Foster Wheeler Environment & Infrastruct
1075 Big Shanty Road NW
Kennesaw, GA 30189

DATES:

EFFECTIVE	EXPIRATION
7/1/2016	1/31/2017

NAME AND PHONE NUMBER(S) OF PRINCIPAL OFFICER:
Rani R. Parks (770) 421-3400

THIS PERMIT INVOLVES:
- [x] Bird Banding
- [ ] Endangered or Threatened Species

LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED:
Penobscot River from Old Town to the southern tip of Verona Island, and at Pleasant River near Addison, and Frenchman's Bay.

REGION(S):
- [ ] A
- [x] B
- [x] C
- [ ] D
- [ ] E
- [ ] F
- [ ] G

CONDITIONS OF PERMIT:

THIS PERMIT DOES NOT COVER SCIENTIFIC COLLECTION OF ANY FISH SPECIES.

Inland Fish: A separate permit for inland fish scientific collections can be found at http://www.maine.gov/ifw/pdf/scientificcollectorspermit06.pdf and faxed to the Fisheries Division at (207) 287-6395; or for more information, contact the Fisheries Division at (207) 287-5261.

Atlantic Salmon: If you are working on a watershed where Atlantic salmon are listed as Endangered or Threatened, you may need to acquire an additional permit from either National Marine Fisheries Service at (207) 866-7322, or U. S. Fish and Wildlife Service at (207) 827-5938.

Permittee shall comply with all applicable State and Federal laws, rules and regulations. Permittee is not authorized to take Federal trust species without the appropriate Federal permit. Permittee may not take species listed by the State of Maine as state endangered or threatened (http://www.maine.gov/ifw/wildlife/species/endangered_species/state_list.htm) or species listed as "special concern" (http://www.maine.gov/ifw/wildlife/species/endangered_species/specialconcern.htm) unless specifically permitted below.

- Authorized to capture Nelson's sparrows, Red-winged blackbirds, and Virginia rails in July to obtain blood samples. Mist nets, net gun array, and wire traps may be used. Birds will be banded.

- Authorized to capture 15 Black Ducks per location in December and January to obtain blood samples, five of which (per location), will be sacrificed for breast muscle tissue collection. Mist nets, net gun array, and wire traps may be used. Ducks will be banded. Please contact Kelsey Sullivan (attached email).

See Page 2 for Continuation

SUBPERMITTEE(S) UNDER THIS PERMIT:

Louise S. Venne, Stephen Myers, John Green, Emily Mastrelli, Kendra Bavor, Vesta Myers

REPORTING REQUIREMENTS:

Annually by January 31 on forms provided by the Commissioner.

SIGNATURE OF AUTHORIZED AGENCY REPRESENTATIVE: Shawn P Haskell

NAME AND TITLE: Shawn P. Haskell, Wildlife Research Supervisor

DATE: 6/27/2016

STATE OF MAINE
DEPARTMENT OF INLAND FISHERIES AND WILDLIFE

Wildlife Division
650 State Street
Bangor, Maine 04401
Phone (207) 941-4466 Fax (207) 941-4450

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NAME AND PHONE NUMBER(S) OF PRINCIPAL OFFICER:
Rani R. Parks (770) 421-3400

THIS PERMIT INVOLVES:
- [x] Bird Banding
- [ ] Endangered or Threatened Species

CONDITIONS OF PERMIT, CONTINUED:

- Spiders and terrestrial nvertebrates are permitted for monitoring for the purposes of this plan.

The applicant must report the finding of any State threatened or endangered species within two business work days from capture. 207-941-4463

SUBPERMITTEE(S) UNDER THIS PERMIT, CONTINUED:

STATE OF MAINE
DEPARTMENT OF INLAND FISHERIES AND WILDIFE

PERMIT

AMENDED 8/19/16

Amec Foster Wheeler Env. & Infrastructure 285 Davidson Avenue Suite 405 Somerset, NJ 08873	**Date Effective** 06/24/2016	**Expiration** 10/31/2016
	Renewable Yes ☐ No ☐	**Fee** N/A

Name of Principal Officer (If business) Daniel Cooke	**Type of Permit** **SCIENTIFIC FISH COLLECTORS**

Location where authorized activity may be conducted
Penobscot River from Orono, Penobscot County to Turner Point, Hancock County, and in Mendall Marsh, Waldo County. Reference sampling will occur in Frenchman Bay in Hancock County (Figure 1)

Permittee must notify the Regional Fishery Biologist prior to conducting any type of fish collections.
Trapnets and gillnets are not to be used without prior written notification to the District Warden. This permit must be carried on the person of the permittee while exercising the privileges granted herein. This permit is non-transferable and permitted activities can only be conducted by those individuals listed on this permit.

Condition(s) of the permit: to comply with a US District Court Order requiring sampling for mercury contamination to be conducted in the Penobscot River and Bay. Table 1 and Figure 1 describe the biota monitoring.

Gear: eel pots, minnow traps, cast nets, seine nets, shovels and hand collection

Species and Numbers: See Table 1 attached

Disposition: The specimens will be sacrificed for laboratory analysis of whole body tissue

Subpermittees: Only the following subpermittees can engage in the permitted activities.

Louise Venne, Kendra Bavor, Mike Lounsbury, Danielle Lerner, Julie Pallozzi, Matt Martin, Lauren Tierney & Ian Desjarlais.

*****Please note: All sampling in tidal water should be vetted through Dept. of Marine Resources*****

All applicants must provide and follow a written disinfection and biosecurity plan. The plan should include policies and procedures for removal of aquatic plants, cleaning and disinfection of field equipment between collection sites, as well as reporting aquatic invasive fish species to the MDIFW (287-5263).

Work on DPS salmon rivers should be cleared with the DMR, Sea Run Fisheries and Habitat.

When working on tribal lands please contact the appropriate tribal official.

Reporting requirements: Copies of any data forms and associated reports must be submitted to the Fisheries Division in our Augusta Office 284 State Street, Augusta, Maine 04333by the end of the calendar year.

Signature of authorized agency representative	Director of Fisheries	Date
		8/19/2016

TABLE 1
APPLICATION FOR SCIENTIFIC COLLECTOR'S PERMIT
MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE
NUMBER OF FISH, SHELLFISH, AND AQUATIC INVERTEBRATE SPECIMENS REQUIRED FOR THE PROPOSED PENOBSCOT RIVER MONITORING PLAN

	Species					
	American Eel (*Anguila rostrata*)	Atlantic Tomcod (*Microgadus tomcod*)	Rainbow Smelt (*Osmerus mordax*)	Mummichog (*Fundulus heteroclitus*)	Blue Mussel (*Mytilus edulis*) **OR** if no mussels present, soft shell clam (*Mya arenaria*)	Polychaetes
	Collection Methods					
	baited eel pots	trawl, beach seine	trawl, beach seine	minnow trap	hand	shovel/clam rake
	Sample Month					
Sample Location	July/August	September	September	July/ August/ September	September	September
Penobscot River and Bay Locations						
OV4/near Orono	20					
BO4/south of Bangor/Brewer	20	20	20	20	20	15
OB5/Winterport	20	20	20	20	20	15
OB1/River outside of Mendall Marsh	20	20	20	20	20	15
ES15/near Odom Ledge					20	
Odom Ledge	20					
ES13/South Verona		20	20		20	15
ES03					20	
ESFP/Fort Point		20	20		20	15
Mendall Marsh Location						
Mendall Marsh				20		15
Reference Location						
Frenchman Bay		20	20	20		15
Total Number of Specimens	**100**	**100**	**100**	**80**	**140**	**90**

Notes:
Locations are arranged in north-to-south order within the Penobscot River and Bay Locations group.

Prepared by: RRP 05/24/2016
Checked by: TAN 06/22/2016

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

PAUL R. LEPAGE

PATRICK C. KELIHER
COMMISSIONER

December 14, 2015

SPECIAL LICENSE NUMBER ME 2016-02-00

Acting under the authority vested in the Commissioner of Marine Resources (DMR) by virtue of 12 M.R.S. Section 6074(8)(D), I hereby issue subject to renewal, a Special License to **DANIEL WILLIAM COOKE**, of AMEC and the other individuals listed below. This Special License exempts said License holders in the course of sampling from the sections of DMR regulations listed below under Exemptions. This Special License is issued subject to the following conditions:

1. Who:

Primary license holder Name *(first, middle, last)*: Daniel William Cooke
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 10/04/61
Phone(s)/Fax, email address: (732) 302-9500 x131, daniel.cooke@amecfw.com
Residential Address: 247 Nagle St.
City, State, Zip: Bound Brook, NJ 08805
Business Address: 285 Davidson Avenue, Suite 405
City, State, Zip: Somerset, New Jersey 08873

Secondary license holder Name *(first, middle, last)*: Travis McCulough Kilpatrick Otis
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 07/20/81
Phone(s)/Fax, email address (not mandatory): (207) 548-6362, travis@otisenterprisesmarine.com
Residential Address: 85 Prospect St.
City, State, Zip: Searsport, ME 04974
Business Address: 85 Prospect St.
City, State, Zip: Searsport, ME 04974

Secondary license holder Name *(first, middle, last)*: Kendra C Bavor
Marine Resources violation in the past 7 years: None [] X If yes [ ] attach copy of waiver
Date of birth (required): 05/29/1966
Phone(s)/Fax, email address (not mandatory):
Residential Address: 310 Pinkham Brook Rd
City, State, Zip: Durham Me 04222
Business Address: 511 Congress st ste200
City, State, Zip:Portland Me 04101

Secondary license holder Name *(first, middle, last):* Matthew Ken Martin
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 12-31-1992
Phone(s)/Fax, email address (not mandatory): D (919)-765-9979
Residential Address: 4708 Delta Ridge Court
City, State, Zip: Raleigh, NC, 27612
Business Address: 4021 Stirrup Creek Drive
City, State, Zip: Durham, NC, 27703

Secondary license holder Name *(first, middle, last)*: David Robert Young
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 11/8/87
Phone(s)/Fax, email address (not mandatory): (330) 312-0324, david.young2@amecfw.com
Residential Address: 533 Discovery Way, Durham, NC 27703
City, State, Zip: Durham, NC 27703
Business Address: 4021 Stirrup Creek Drive Suite 100.
City, State, Zip: Durham, NC 27703

Secondary license holder Name *(first, middle, last)*: Julie Paige Pallozzi
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 7/3/1992
Phone(s)/Fax, email address (not mandatory): Desk: 207-828-2628 Cell: 207-899-9720 email: julie.pallozzi@amecfw.com
Residential Address: 200 Chute Rd
City, State, Zip: Windham, ME, 04062
Business Address: 511 Congress St
City, State, Zip: Portland, ME, 04101

Secondary license holder Name *(first, middle, last)*: Lauren Myers Tierney
Marine Resources violation in the past 7 years: None [X]
Date of birth (required): 9/26/1993
Phone(s)/Fax, email address (not mandatory): (207) 828-3418 Lauren.Tierney@amecfw.com
Residential Address: 57 Melbourne Street
City, State, Zip: Portland, ME, 04101
Business Address: 511 Congress Street
City, State, Zip: Portland, ME, 04101

Secondary license holder Name *(first, middle, last)*: Michael Howard Lounsbury
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 6/24/1960
Phone(s)/Fax, email address (not mandatory): 1-207-553-0645
Residential Address: 91 McKinley Street
City, State, Zip: South Portland, Maine 04106
Business Address: 511 Congress Street
City, State, Zip: Portland, Maine 04101

Secondary license holder Name *(first, middle, last)*: Ian Cody Desjarlais
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 06/14/1982
Phone(s)/Fax, email address (not mandatory): (207) 828 2664, ian.desjarlais@amecfw.com
Residential Address: 17 Pilot Point Road
City, State, Zip: Cape Elizabeth, ME 04107
Business Address: 511 Congress St Ste 200
City, State, Zip: Portland, ME 04101

Secondary license holder Name *(first, middle, last)*: Danielle Sophia Lerner
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver

Date of birth (required): 6/20/1989
Phone(s)/Fax, email address (not mandatory): 1-207-828-3535
Residential Address: 244 Ridge Road
City, State, Zip: Lisbon, Falls Maine 04252
Business Address: 511 Congress Street
City, State, Zip: Portland, Maine 04101

Vessels:
Maine Registration and or Federal Documentation number: 1187977
Vessel Name: First Team
Owner: Travis Otis
Issuance date: June 2, 2016

2. **What:** The purpose of the Proposed Penobscot River Monitoring is the further characterization of current conditions in the Penobscot River and Bay. Collection of fish and invertebrates for tissue sampling as ordered by the US District Court. Table 1 describes the biota monitoring, including the list of species and estimated number of specimens per species.

   Protected Species: Applicant has corresponded with NOAA representatives regarding potential interactions with listed Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon, and has been advised to avoid seining between sites OB4 and OB5 (See Figure 1) as there are sturgeon in that region throughout the summer. Beyond this caveat, NOAA has advised that it is unlikely that the proposed sampling will interfere with any of the protected species listed above. However, NOAA advised that should the applicant encounter any listed species during sampling, that they contact NOAA as soon as possible and also coordinate sampling with NOAA representatives if possible.

3. **Where:** **Figure 1** shows the sample locations on the Penobscot River and Bay, and Frenchman Bay. Specimens will not be housed; all specimens to be dispatched for muscle tissue collection and whole body sampling analysis. Individuals collected and not required for analysis will be released unharmed at the location of capture.
4. **When:** July 2016 through December 2016, however, sampling will not occur during the Atlantic salmon spawning season for the Penobscot River.
5. **How:** Collection will be performed using a variety of techniques, including baited eel pots, minnow traps, hand capture, shovel, seine nets, cast nets, trawling, and commercial traps. Hand capture will be used exclusively for blue mussels, and commercial traps will be used exclusively for lobster (See Table 1 for form of capture used for other species). For biosecurity, please refer to the attached Biosecurity and Disinfection Plan. Specimens will be temporarily stored in live well. Per discussions with DMR, specimens not required for tissue samples will be released the same day in the vicinity of capture; specimens used for tissue sampling will be stored on dry ice and transported to the laboratory for analysis. The laboratory will be responsible for final disposition of the specimens
6. **Conditions:**

- **Marine Patrol** Division I office (west of Port Clyde), Tel: 633-9595; or the Division II office (east of Port Clyde), Tel: 667-3373, *shall* be contacted prior to the start up of collecting activities each semester to make arrangements as to the necessary frequency when to contact Marine Patrol to provide the Special License (SL) number, dates, location(s) of activities, name of special license holder, other persons in the field, and if transporting of specimens will occur who will be transporting specimens, etc.
- **Notification Requirements:** Should applicant encounter any listed Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon, applicant will cease activities and contact NOAA Federal representative Jeff Murphy as soon as possible (jeff.murphy@noaa.gov).

- A report on research results or status (electronic format) shall be provided to the Department at the end of each year and prior to renewal. Research personnel of the DMR shall have access to all biological data.
- * SL's are contingent upon all vessels holding current USCG commercial fishing safety inspections [USCG CFVS]. This Special License does not use a vessel therefore one is not listed.
- No marine organism authorized under this SL shall be used for human consumption.
- Any infraction of these conditions or any violation of any Marine Resources laws shall be grounds for the immediate revocation of this Special License.
- Additional conditions may be added at the discretion of the Commissioner.

This Special License ***expires on December 31, 2016*** and has ***four*** renewals.

Hannah M. Dean

Hannah M. Dean
For Commissioner Patrick C. Keliher

cc: Marine Patrol Divisions I & II

TABLE OF EXEMPTIONS

Exempted Species	12 M.R.S. and DMR Regulation Chapters, exemptions:
Lobster	Chapter 25.65 (Exempting collection of Lobster on Penobscot River north of closure line).
Smelt	Chapter 40.12 (Exempting collection of smelt on Penobscot River using trawl).
Marine Worms	Chatper 28.01 (Exempting collection of Marine Worms on all days of the week).
Blue Mussels	Chapter 95/96 (Exempting collection of blue mussels in closed areas).

TABLE 1

APPLICATION FOR SPECIAL LICENSE

MAINE DEPARTMENT OF MARINE RESOURCES

NUMBER OF FISH, SHELLFISH, AND AQUATIC INVERTEBRATE SPECIMENS REQUIRED FOR THE PROPOSED PENOBSCOT RIVER MONITORING PLAN

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	Collection Methods						
	baited eel pots	trawl	trawl	minnow trap	hand	commercial traps	shovel
	Sample Month						
Sample Location	July/August	September	September	July/August/September	September	September	September
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Turner Point						20	
Harborside						20	
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Mendall Marsh				20			15
Reference Location							
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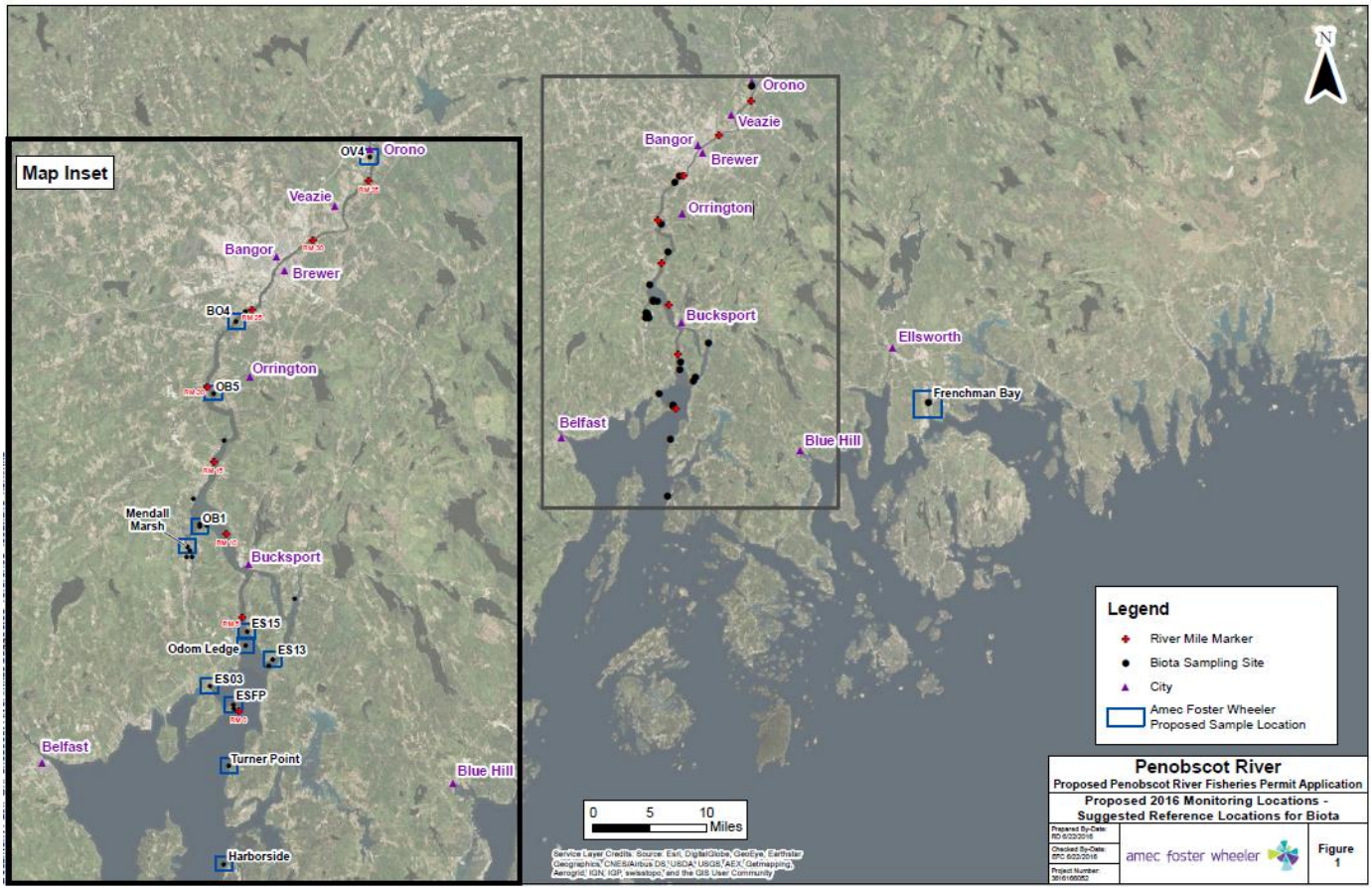
Notes:
Locations are arranged in north-to-south order within the Penobscot River and Bay Locations group.

Prepared by: RRP
05/24/2016
Checked by: TAN
06/22/2016

OFFICES AT 2 BEECH ST., BAKER BUILDING, HALLOWELL, MAINE
http://www.Maine.gov/dmr
PHONE: (207) 624-6550 FAX: (207) 624-6024

FIGURE 1


Map Inset
OV4
Orono
Veazie
Bangor
Brewer
BO4
Orrington
OB5
Mendall Marsh
OB1
Bucksport
ES15
Odom Ledge
ES13
ES03
ESFP
Belfast
Turner Point
Blue Hill
Harborside
Orono
Veazie
Bangor
Brewer
Orrington
Bucksport
Belfast
Blue Hill
Ellsworth
Frenchman Bay
N
0 5 10 Miles
Legend
River Mile Marker
Biota Sampling Site
City
Amec Foster Wheeler Proposed Sample Location
Penobscot River
Proposed Penobscot River Fisheries Permit Application
Proposed 2016 Monitoring Locations - Suggested Reference Locations for Biota
amec foster wheeler
Figure 1

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

PAUL R. LEPAGE

PATRICK C. KELIHER
COMMISSIONER

July 12, 2016

SPECIAL LICENSE NUMBER ME 2016-02-00

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City, State, Zip: Bound Brook, NJ 08805
Business Address: 285 Davidson Avenue, Suite 405
City, State, Zip: Somerset, New Jersey 08873

Secondary license holder Name *(first, middle, last)*: Travis McCulough Kilpatrick Otis
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Date of birth (required): 07/20/81
Phone(s)/Fax, email address (not mandatory): (207) 548-6362, travis@otisenterprisesmarine.com
Residential Address: 85 Prospect St.
City, State, Zip: Searsport, ME 04974
Business Address: 85 Prospect St.
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Secondary license holder Name *(first, middle, last)*: David Robert Young
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Date of birth (required): 11/8/87
Phone(s)/Fax, email address (not mandatory): (330) 312-0324, david.young2@amecfw.com
Residential Address: 533 Discovery Way, Durham, NC 27703
City, State, Zip: Durham, NC 27703
Business Address: 4021 Stirrup Creek Drive Suite 100.
City, State, Zip: Durham, NC 27703

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Date of birth (required): 7/3/1992
Phone(s)/Fax, email address (not mandatory): Desk: 207-828-2628 Cell: 207-899-9720 email: julie.pallozzi@amecfw.com
Residential Address: 200 Chute Rd
City, State, Zip: Windham, ME, 04062
Business Address: 511 Congress St
City, State, Zip: Portland, ME, 04101

Secondary license holder Name *(first, middle, last)*: Lauren Myers Tierney
Marine Resources violation in the past 7 years: None [X]
Date of birth (required): 9/26/1993
Phone(s)/Fax, email address (not mandatory): (207) 828-3418 Lauren.Tierney@amecfw.com
Residential Address: 57 Melbourne Street
City, State, Zip: Portland, ME, 04101
Business Address: 511 Congress Street
City, State, Zip: Portland, ME, 04101

Secondary license holder Name *(first, middle, last)*: Michael Howard Lounsbury
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 6/24/1960
Phone(s)/Fax, email address (not mandatory): 1-207-553-0645
Residential Address: 91 McKinley Street
City, State, Zip: South Portland, Maine 04106
Business Address: 511 Congress Street
City, State, Zip: Portland, Maine 04101

Secondary license holder Name *(first, middle, last)*: Ian Cody Desjarlais
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver
Date of birth (required): 06/14/1982
Phone(s)/Fax, email address (not mandatory): (207) 828 2664, ian.desjarlais@amecfw.com
Residential Address: 17 Pilot Point Road
City, State, Zip: Cape Elizabeth, ME 04107
Business Address: 511 Congress St Ste 200
City, State, Zip: Portland, ME 04101

Secondary license holder Name *(first, middle, last)*: Danielle Sophia Lerner
Marine Resources violation in the past 7 years: None [X] If yes [ ] attach copy of waiver

Date of birth (required): 6/20/1989
Phone(s)/Fax, email address (not mandatory): 1-207-828-3535
Residential Address: 244 Ridge Road
City, State, Zip: Lisbon, Falls Maine 04252
Business Address: 511 Congress Street
City, State, Zip: Portland, Maine 04101

Vessels:
Maine Registration and or Federal Documentation number: 1187977
Vessel Name: First Team
Owner: Travis Otis
Vessel Safety Issuance date: June 2, 2016

2. **What:** The purpose of the Proposed Penobscot River Monitoring is the further characterization of current conditions in the Penobscot River and Bay. Collection of fish and invertebrates for tissue sampling as ordered by the US District Court. Table 1 describes the biota monitoring, including the list of species and estimated number of specimens per species.

   Protected Species: Applicant has corresponded with NOAA representatives regarding potential interactions with listed Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon, and has been advised to avoid seining between sites OB4 and OB5 (See Figure 1) as there are sturgeon in that region throughout the summer. Beyond this caveat, NOAA has advised that it is unlikely that the proposed sampling will interfere with any of the protected species listed above. However, NOAA advised that should the applicant encounter any listed species during sampling, that they contact NOAA as soon as possible and also coordinate sampling with NOAA representatives if possible.

3. **Where:** **Figure 1** shows the sample locations on the Penobscot River and Bay, and Frenchman Bay. Specimens will not be housed; all specimens to be dispatched for muscle tissue collection and whole body sampling analysis. Individuals collected and not required for analysis will be released unharmed at the location of capture.
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6. **Conditions:**

- **Marine Patrol** Division I office (west of Port Clyde), Tel: 633-9595; or the Division II office (east of Port Clyde), Tel: 667-3373, *shall* be contacted prior to the start up of collecting activities each semester to make arrangements as to the necessary frequency when to contact Marine Patrol to provide the Special License (SL) number, dates, location(s) of activities, name of special license holder, other persons in the field, and if transporting of specimens will occur who will be transporting specimens, etc.
- **Notification Requirements:** Should applicant encounter any listed Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon, applicant will cease activities and contact NOAA Federal representative Jeff Murphy as soon as possible (jeff.murphy@noaa.gov).

- A report on research results or status (electronic format) shall be provided to the Department at the end of each year and prior to renewal. Research personnel of the DMR shall have access to all biological data.
- * SL's are contingent upon all vessels holding current USCG commercial fishing safety inspections [USCG CFVS]. This Special License does not use a vessel therefore one is not listed.
- No marine organism authorized under this SL shall be used for human consumption.
- Any infraction of these conditions or any violation of any Marine Resources laws shall be grounds for the immediate revocation of this Special License.
- Additional conditions may be added at the discretion of the Commissioner.

This Special License ***expires on December 31, 2016*** and has ***four*** renewals.

Hannah M. Dean

Hannah M. Dean
For Commissioner Patrick C. Keliher

cc: Marine Patrol Divisions I & II

TABLE OF EXEMPTIONS

Exempted Species	12 M.R.S. and DMR Regulation Chapters, exemptions:
Lobster	Chapter 25.65 (Exempting collection of Lobster on Penobscot River north of closure line).
Smelt	Chapter 40.12 (Exempting collection of smelt on Penobscot River using trawl).
Marine Worms	Chatper 28.01 (Exempting collection of Marine Worms on all days of the week).
Blue Mussels	Chapter 95/96 (Exempting collection of blue mussels in closed areas).

TABLE 1

APPLICATION FOR SPECIAL LICENSE

MAINE DEPARTMENT OF MARINE RESOURCES

NUMBER OF FISH, SHELLFISH, AND AQUATIC INVERTEBRATE SPECIMENS REQUIRED FOR THE PROPOSED PENOBSCOT RIVER MONITORING PLAN

	Species						
	American Eel (*Anguila rostrata*)	Atlantic Tomcod (*Microgadus tomcod*)	Rainbow Smelt (*Osmerus mordax*)	Mummichog (*Fundulus heteroclitus*)	Blue Mussel (*Mytilus edulis*) **OR** if no Mussels Present, soft Shell Clam (*mya arenaria*)	Lobster (*Homarus americanus*)	Polychaetes
	Collection Methods						
	baited eel pots	trawl	trawl	minnow trap	hand	commercial traps	shovel
	Sample Month						
Sample Location	July/August	September	September	July/August/September	September	September	September
Penobscot River and Bay Locations							
OV4/near Orono	20						
BO4/south of Bangor/Brewer	20	20	20	20	20		15
OB5/Winterport	20	20	20	20	20		15
OB1/River outside of Mendall Marsh	20	20	20	20	20		15
ES15/near Odom Ledge					20		
Odom Ledge	20					20	
ES13/South Verona		20	20		20	20	15
ES03					20		
ESFP/Fort Point		20	20		20		15
Turner Point						20	
Harborside						20	
Mendall Marsh Location							
Mendall Marsh				20			15
Reference Location							
Frenchman Bay		20	20	20			15
Total Number of Specimens	**100**	**100**	**100**	**80**	**140**	**80**	**90**

Notes:
Locations are arranged in north-to-south order within the Penobscot River and Bay Locations group.

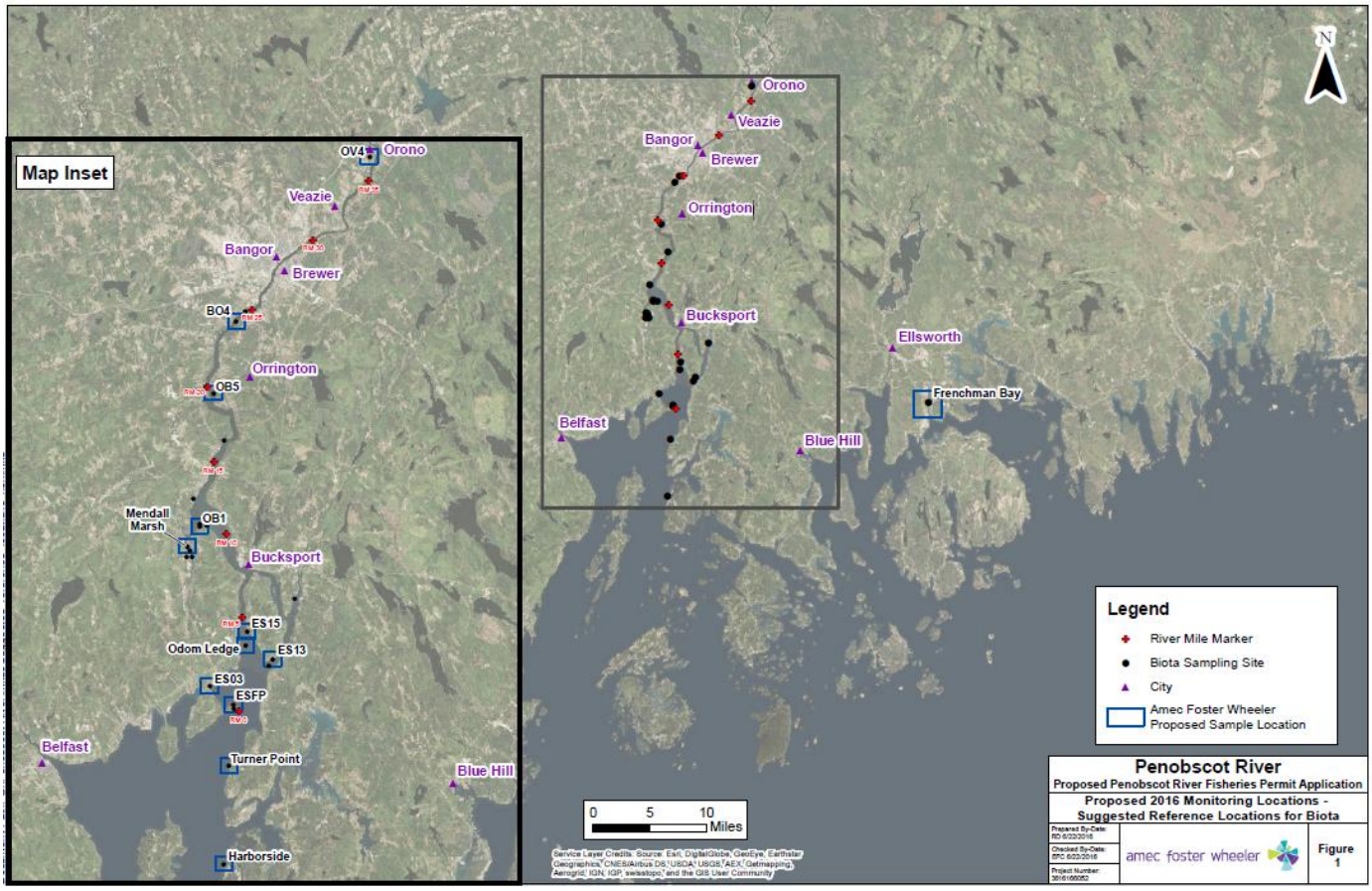
Prepared by: RRP

OFFICES AT 2 BEECH ST., BAKER BUILDING, HALLOWELL, MAINE
http://www.Maine.gov/dmr
PHONE: (207) 624-6550 FAX: (207) 624-6024

05/24/2016

Checked by: TAN
06/22/2016

FIGURE 1



United States Department of the Interior
U.S. GEOLOGICAL SURVEY
PATUXENT WILDLIFE RESEARCH CENTER
BIRD BANDING LABORATORY
12100 BEECH FOREST ROAD STE-4037
LAUREL, MD 20708-4037
301-497-5790

FEDERAL BIRD BANDING PERMIT

Permittee: Personal	Permit Number:	Action:	Action Date:	Issue Date:	Valid Until:
MR STEPHEN J MYERS	23035	Revise	06/01/16	04/03/00	07/31/18
15598 TURNBERRY STREET	**Signature of Issuing Official, Chief, Bird Banding Laboratory** Bruce Peterjohn				
MORENO VALLEY, CA 92555	**Signature of Permittee**				

Permittee agrees to band in accordance with the general conditions of this permit and with the specific authorization/s listed below:

Permittee is Authorized To Band:

All Species Except Waterfowl and Eagles
Hummingbirds
* Threatened and Endangered species are not included in groups unless specified.

California Gnatcatcher
California Least Tern
Least Bell's Vireo
Snowy Plover

In the States of:

CA * ME * NM *

With Special Authorization to:

Use USGS Bands On Above Listed North American Migrants in * Bahamas, The * Upon Host Country Approval Band
Take, possess and transport blood samples-not to exceed 1% body mass
Take, possess and transport feather samples
Hand capture
Use Bow nets
Use Drop nets
Use Mist nets
Trap

Comments: Snowy Plover and California Least Tern banding to be conducted Only by Matthew L Amalong

And Additionally Authorized to Use The Following Auxiliary Marking Authorization/s:

Marker Type	Species	Colors of marker	Locations	Seg #
Plastic Color Leg Band (01A)	Lark Sparrow	Black, Blue, Green, Orange, Pink, Purple, Red, Yellow	Riverside, CA San Diego, CA San Bernardino, CA	2
Comments IN COOPERATION WITH MCKERNAN, 21005				
Plastic Color Leg Band (01A)	California Gnatcatcher	Black, Blue, Green, Orange, Purple, Red, White, Yellow	San Diego, CA Riverside, CA	3

Permittee: Personal	Permit Number:	Action:	Action Date:	Issue Date:	Valid Until:
MR STEPHEN J MYERS	23035	Revise	06/01/16	04/03/00	07/31/18
15598 TURNBERRY STREET	Signature of Issuing Official, Chief, Bird Banding Laboratory: Bruce Peterjohn				
MORENO VALLEY, CA 92555	Signature of Permittee				

Permittee agrees to band in accordance with the general conditions of this permit and with the specific authorization/s listed below:

Marker Type	Species	Colors of marker	Locations	Seg #

Comments
IN COOPERATION WITH MCKERNAN, 21005

Plastic Color Leg Band (01A)	Cactus Wren Le Conte's Thrasher	Black, Blue, Green, Pink, Purple, Red, Yellow	San Bernardino, CA Riverside, CA	4

Comments
IN COORDINATION WITH MCKERNAN

Plastic Color Leg Band (01A)	Horned Lark	Dark Blue, Green, Light Blue, Light Green, Purple, Red, White, Yellow	Kern, CA San Bernardino, CA Los Angeles, CA	5

Comments
IN COOPERATION WITH #22997

Plastic Color Leg Band (01A)	Western Scrub-Jay	Black, Dark Blue, Green, Light Blue, Orange, Purple, Red, Yellow	Riverside, CA	6

Plastic Color Leg Band (01A)	Black-cowled Oriole Shiny Cowbird	Black, Light Blue, Light Green, Orange, Purple, Red, White, Yellow	Bahamas, The	7

Comments
Blk-cowled = Icteris dominicensis

Plastic Color Leg Band (01A)	Least Bell's Vireo	Black, Dark Blue, Dark Green, Hot Pink, Light Blue, Light Green, Light Pink, Orange, Purple, Red, White, Yellow	San Diego, CA	8

Plastic Color Leg Band (01A)	Song Sparrow Yellow Warbler	Black, Blue, Green, Mauve, Orange, Pink, Red,	Mono, CA	9

Permittee: Personal	Permit Number:	Action:	Action Date:	Issue Date:	Valid Until:
MR STEPHEN J MYERS	23035	Revise	06/01/16	04/03/00	07/31/18
15598 TURNBERRY STREET	Signature of Issuing Official, Chief, Bird Banding Laboratory: Bruce Peterjohn				
MORENO VALLEY, CA 92555	Signature of Permittee				

Permittee agrees to band in accordance with the general conditions of this permit and with the specific authorization/s listed below:

Marker Type	Species	Colors of marker	Locations	Seg #
		White		9

The following Subpermittee/s are authorized to band under the direction of the above permittee, in accordance with the same general conditions, and the subpermittee specific authorizations listed below:

23035 - A EDWARDS J MR 23777 VALLEY VIEW APPLE VALLEY, CA 92308

Is Authorized To Band:

All Species Except Waterfowl and Eagles
* Threatened and Endangered species are not included in groups unless specified.

In the States Of:

CA *

With Special Authorization to:

Band
Use Mist nets
Trap

23035 - B DEPPE B R MR 9076 MESA VISTA APPLE VALLEY, CA 92308

Is Authorized To Band:

All Species Except Waterfowl and Eagles
* Threatened and Endangered species are not included in groups unless specified.

In the States Of:

CA *

With Special Authorization to:

Band
Auxiliary mark
Use Mist nets
Trap

Permittee: Personal	Permit Number:	Action:	Action Date:	Issue Date:	Valid Until:
MR STEPHEN J MYERS	23035	Revise	06/01/16	04/03/00	07/31/18
15598 TURNBERRY STREET	Signature of Issuing Official, Chief, Bird Banding Laboratory: Bruce Peterjohn				
MORENO VALLEY, CA 92555	Signature of Permittee				

Permittee agrees to band in accordance with the general conditions of this permit and with the specific authorization/s listed below:

23035 - C LEUSCHNER K M MR COLLEGE OF THE DESERT 43500 MONTEREY AVENUE PALM DESERT, CA 92260

Is Authorized To Band:

All Species Except Waterfowl and Eagles
* Threatened and Endangered species are not included in groups unless specified.

In the States Of:

CA *

With Special Authorization to:

Band
Auxiliary mark
Use Mist nets
Trap

23035 - D GREEN J F MR 3120 MT VERNON AVE RIVERSIDE, CA 92507

Is Authorized To Band:

All Species Except Waterfowl and Eagles
* Threatened and Endangered species are not included in groups unless specified.

In the States Of:

CA * NM *

With Special Authorization to:

Band
Use Mist nets
Trap

23035 - E MS MELISSA R PRICE 25842 LOMAS VERDES ST REDLANDS, CA 92373

Is Authorized To Band:

Passerines and Near-passerines
* Threatened and Endangered species are not included in groups unless specified.

In the States Of:

CA *

With Special Authorization to:

Use USGS Bands On Above Listed North American Migrants in * Bahamas, The * Upon Host Country Approval
Band
Auxiliary mark
Take, possess and transport blood samples-not to exceed 1% body mass
Use Mist nets
Trap

Permittee: Personal	Permit Number:	Action:	Action Date:	Issue Date:	Valid Until:
MR STEPHEN J MYERS	23035	Revise	06/01/16	04/03/00	07/31/18
15598 TURNBERRY STREET	Signature of Issuing Official, Chief, Bird Banding Laboratory	Bruce Peterjohn			
MORENO VALLEY, CA 92555	Signature of Permittee				

Permittee agrees to band in accordance with the general conditions of this permit and with the specific authorization/s listed below:

23035 - H MATTHEW L AMALONG 18578 BROOKHURST STREET FOUNTAIN VALLEY, CA 92708

Is Authorized To Band:

California Least Tern
Snowy Plover

In the States Of:

CA *

With Special Authorization to:

Band
Hand capture
Use Bow nets
Use Drop nets
Use Mist nets

23035 - I EMILY MASTRELLI 3188 SALMON STREET SAN DIEGO, CA 92124

Is Authorized To Band:

Passerines and Near-passerines
* Threatened and Endangered species are not included in groups unless specified.

In the States Of:

CA *

With Special Authorization to:

Band
Use Mist nets

FEDERAL BIRD BANDING PERMIT

Under the provisions of Regulations issued under the Migratory Bird Treaty Act of July 3, 1918 (40 Stat. 755) as amended, or the Bald Eagle Act of June 8, 1940 (54 Stat. 250) as amended, the person named hereon is authorized to capture, for scientific banding or marking purposes, those migratory birds described hereon and to salvage birds accidentally killed during normal banding activities.

This permit is subject to the terms, exceptions and restrictions expressed herein or on the reverse side hereof and is further subject to any applicable Territorial, State, Tribal or Federal Regulations.

This permit is invalid unless accompanied by any required State permits or licenses.

GENERAL CONDITIONS

1. The Permittee is not authorized to capture or possess migratory birds for any reason other than banding, marking or salvage of banding mortalities for scientific purposes. NOR IS THE PERMITTEE ALLOWED TO HOLD MIGRATORY BIRDS FOR A PERIOD OF MORE THAN 24 HOURS. Live birds shall be released as soon as practical after capture.
2. You may donate dead migratory birds or any parts thereof (except bald eagles and golden eagles, and species listed as threatened and endangered) without additional authorization from the migratory bird permit issuing office to public institutions (as specified in 50 CFR 10.12) or individuals or entities authorized by permit to acquire and possess migratory bird specimens for educational purposes. All dead specimens that you do not transfer to another authorized party must be disposed of by such means as are necessary to ensure that they are not exposed to animals in the wild.
3. You may not salvage and must immediately report to the USFWS Office of Law Enforcement any dead or injured migratory birds that you encounter that appear to have been poisoned, shot, electrocuted, have collided with industrial power generation equipment, or were otherwise killed or injured as the result of potential criminal activity. Please contact BBL for more information.
4. All eagle feathers and/or whole eagle carcasses must be shipped to the National Eagle Repository. Contact: U.S. Fish and Wildlife Service, National Eagle and Wildlife Repository, 5650 Havana St., RMA, Building 128, Commerce City, Colorado 80022, (303) 287-2110.
5. The Permittee shall keep RECORDS accounting for the use of all bands received. Periodic RECORDS COVERING THE USE OF THESE BANDS shall be submitted to the Bird Banding Laboratory in accordance with the instructions received there from. Failure to provide data in accordance with the instructions received from the Bird Banding Laboratory is sufficient justification for the revocation of this permit. The Permittee shall keep records of disposition of salvaged banding mortalities for a period of five years and shall be reported to the Bird Banding Laboratory upon request.
6. The holder of this permit shall not sell, exchange, or transfer bands to unauthorized banders or to the general public. All transfers to authorized banders must be communicated to the Bird Banding Laboratory prior to the transfer of bands. Any unused bands remaining when this permit is voluntarily returned, revoked, or expired must be returned to the Bird Banding Laboratory.
7. The Permittee shall, at all reasonable hours, allow any authorized representative of the U. S. Geological Survey or the U.S. Fish and Wildlife Service to ENTER and INSPECT the premises where operations authorized by this permit are being conducted and shall allow such representative to inspect the records relating to such operations.
8. This permit may be SUSPENDED or REVOKED by the Director of the U.S. Geological Survey or authorized representative, if the Permittee violates any of the provisions in the regulations under which this permit is issued or if the Permittee fails to render promptly any reports required. This permit is, at all times, subject to suspension or revocation at the discretion of the Director or representative.
9. This permit is not transferable and must be in possession of the Permittee when exercising the authorizations granted herein.
10. All traps, nets or other capture devices shall bear a TAG or LABEL showing the name, address and permit number of the Permittee; alternatively the trapping area shall be adequately marked with POSTERS provided by the Bird Banding Laboratory. The Permittee's name, address and permit number shall be legibly displayed on such posters.
11. This permit DOES NOT authorize the capture of any birds on any property, public or private without the CONSENT OF THE OWNER OR CUSTODIAN THEREOF.
12. All Banding under this permit is in accordance with the principles, spirit, and intent of the Animal Welfare Act of 1970 and the most recent revision of The Ornithological Council's Guidelines in the Use of Wild Birds in Research.
13. Unless specifically noted on the reverse, the following ARE NOT AUTHORIZED:

a. The taking of blood or feather sampling from any bird.

b. The use of ANY BAND, clip, paint, dye, signal-sending device or any marking device other than the official numbered leg bands issued by the Bird Banding Laboratory.

c. The use of MIST NETS or other nets for the capturing of birds.

d. The use of TRANQUILIZING DRUGS OR OTHER CHEMICALS for the purpose of capturing birds.

e. Trapping or disturbing the nests or nestlings, for the purpose of banding or marking, of species designated by the Secretary of Interior as "ENDANGERED "or "THREATENED."

f. The handling of any PREVIOUSLY BANDED BIRD in any manner which may bias data on file in the Bird Banding Laboratory which pertain to that bird or which may alter that bird's survival potential, behavior or other normal characteristics. This specifically includes adding markers to or removing markers from previously banded birds.

Form 9-475
(April 2011)

SCIENTIFIC COLLECTING

Permit Number: MB13304C-0

Effective: 12/13/2016 Expires: 03/31/2019

Issuing Office:

Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Migratory Bird Permit Office
P.O. Box 779
Hadley, MA 01035-0779
Tel: 413-253-8643 Fax: 413-253-8424
Email: permitsR5MB@fws.gov

Jonathan B. Ratcliffe

for

CHIEF, MIGRATORY BIRD PERMIT OFFICE - REGION 5

Permittee:

AMEC FOSTER WHEELER ENVIORMENT & INFRASTRUCTURE INC
1075 BIG SHANTY NW SUITE 100
KENNESAW, GA 30144
U.S.A.

Name and Title of Principal Officer:
DANIEL R. GROGAN - VICE PRESIDENT

Authority: Statutes and Regulations: 16 USC 703-712, 16 USC 668(a); 50 CFR Part 13, 50 CFR 21.23, 50 CFR 22.21.

Location where authorized activity may be conducted:

Throughout ME with corresponding State authority

Reporting requirements:

ANNUAL REPORT DUE: 01/31
You must submit an annual report to your Regional Migratory Bird Permit Office each year, even if you had no activity. Form at www.fws.gov/forms/3-202-1.pdf.

Conditions and Authorizations:

A. General conditions set out in Subpart B of 50 CFR 13, and specific conditions contained in Federal regulations cited above, are hereby made a part of this permit. All activities authorized herein must be carried out in accord with and for the purposes described in the application submitted. Continued validity, or renewal of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.

B. The validity of this permit is also conditioned upon strict observance of all applicable foreign, state, local tribal, or other federal law.

C. Valid for use by permittee named above.

D. You are authorized to take (using same methods as specified on the state permit for this activity), transport, and possess the following migratory birds for scientific purposes: 45 American Black Ducks (15 lethal take, 30 trap and release for blood sampling).

E. You are authorized to salvage dead migratory birds (except species listed as threatened or endangered under the Endangered Species Act). Any dead bald eagle or golden eagle salvaged must be reported within 48 hours to the National Eagle Repository at (303) 287-2110 and to the migratory bird permit issuing office at 413-253-8643 or fax 413-253-8424. The Repository will provide directions for shipment of these specimens.

For a list of threatened and endangered species in your state, visit the U.S. Fish and Wildlife Service's Threatened and Endangered Species System (TESS) at: http://www.fws.gov/endangered/.

F. You are authorized to salvage abandoned (unoccupied) migratory bird nests and nonviable eggs outside the nesting season, except for nests and eggs of bald eagles or golden eagles, or species listed as threatened or endangered under the Endangered Species Act.

G. You may not salvage and must immediately report to the USFWS Office of Law Enforcement any dead or injured migratory birds that you encounter that appear to have been poisoned, shot, electrocuted, have collided with industrial power generation equipment, or were otherwise killed or injured as the result of potential criminal activity. See FWS OLE contact information below.

H. Any person who is

(1) employed by or under contract to you for the activities specified in this permit, or
(2) otherwise designated a subpermittee by you in writing, may exercise the authority of this permit.

I. You and any subpermittees must comply with the attached Standard Conditions for Federal Migratory Bird Scientific Collecting Permits. **These standard conditions are a continuation of your permit conditions *and must remain with your permit.***

For suspected illegal activity, immediately contact USFWS Office of Law Enforcement at: East Orland, ME 207-469-6642

Standard Conditions
Migratory Bird Scientific Collecting Permits
50 CFR 21.23

All of the provisions and conditions of the governing regulations at 50 CFR part 13 and 50 CFR part 21.23 are are conditions of your permit. Failure to comply with the conditions of your permit could be cause for suspension of the permit. The standard conditions below are a continuation of your permit conditions and must remain with your permit. If you have questions regarding these conditions, refer to the regulations or, if necessary, contact your migratory bird permit issuing office. For copies of the regulations and forms, or to obtain contact information for your issuing office, visit: http://www.fws.gov/migratorybirds/mbpermits.html.

1. Live migratory birds you take and retain alive must be released at the capture site unless otherwise authorized on the face of the permit.

2. You must tag each migratory bird specimen you collect or salvage. Each tag must include the information below. The permit number under which the specimen was collected or salvaged must be recorded in the permanent accession record.
   (a) Date and location where the specimen was collected or salvaged, and
   (b) Name of the person who collected or salvaged the specimen.

3. If you encounter a migratory bird with a Federal band issued by the U.S. Geological Survey **Bird Banding Laboratory,** Laurel, MD, report the band number to **1-800-327-BAND (2263) or www.reportband.gov.**

4. Nontoxic shot must be used with the following exceptions:
   (a) You may use lead shot when nontoxic shot is not produced in the small sizes needed to preserve the integrity of the specimens;
   (b) You may use lead shot in habitats where its use is allowed for sport hunting purposes.

5. Unless otherwise authorized on your permit, all migratory game birds taken during open hunting season must be in compliance with all applicable Federal and State hunting regulations.

6. This permit does not authorize the take or live trapping and release of bald eagles or golden eagles or species listed as endangered or threatened.

7. This permit does not authorize the take or release of migratory birds on Federal lands without additional prior written authorization from the applicable Federal agency, or on State lands or other public or private property without prior written permission or permits from landowner or custodian.

8. You may donate dead migratory birds or any parts thereof (except bald eagles and golden eagles, and species listed as threatened and endangered) without additional authorization from the migratory bird permit issuing office to public institutions (as specified in 50 CFR 10.12) or individuals or entities authorized by permit to acquire and possess migratory bird specimens for educational purposes.

   All dead specimens that you do not transfer to another authorized party must be disposed of by such means as are necessary to ensure that they are not exposed to animals in the wild.

   All eagle feathers and/or whole eagle carcasses must be shipped to the National Eagle Repository. Contact: **U.S. Fish and Wildlife Service, National Eagle and Wildlife Repository, RMA, Building 128, 6550 Gateway Rd., Commerce City, Colorado 80022, (303) 287-2110.**

9. A subpermittee is an individual to whom you have provided written authorization to conduct some or all of the permitted activities in your absence. Subpermittees must be at least 18 years of age. As the permittee, you are legally responsible for ensuring that your subpermittees are adequately trained and adhere to the terms of your permit. You are responsible for maintaining current records of who you have designated as a subpermittee, including copies of designation letters you have provided.

10. You and any subpermittees must carry a legible copy of this permit and display it upon request whenever you are exercising its authority. Subpermittees must also carry your written subpermittee designation letter.

11. Your annual report may include final reports, publications, or other documentation describing the results of the project.

12. You must maintain records as required by 50 CFR 13.46 and 50 CFR 21.23(c)(4). All records relating to the permitted activities must be kept at the location identified in writing by you to the migratory bird permit issuing office.

13. Acceptance of this permit authorizes the Fish and Wildlife Service to inspect any wildlife held, and to audit or copy any permits, books, or records required to be kept by the permit and governing regulations.

14. You may not conduct the activities authorized by this permit if doing so would violate the laws of the applicable State, county, municipal or tribal government or any other applicable law.

(SCCL - 12/3/2011)

APPENDIX B
Field Data Records

APPENDIX B-1
2016 Biota Collection Forms

amec foster wheeler

SAMPLE COLLECTION LOG
TERRESTRIAL INSECT WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071816	**Location ID:**	MMSW-C
Collectors:	LT, ML	**Lat/Long:**	44.5801 -68.8609
Media:	Whole Body (WB)	**Weather:**	65 degrees, dusk, humid
Species:	Terrestrial Insect (TIN)	**Collection Method:**	White Sheet and Lights at Night, butterfly nets during the day

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMSW-C _ 071816 _TIN_WB_ 02	06:32	NR	2.5		
MMSW-C _ 071816 _TIN_WB_ 03	06:33	NR	2.3		
MMSW-C _ 071816 _TIN_WB_ 04	07:16	NR	2.4		
MMSW-C _ 071816 _TIN_WB_ 05	07:52	NR	2.5		
_					
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions: NR = Not Recorded

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

amec foster wheeler

SAMPLE COLLECTION LOG
TERRESTRIAL INSECT WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071916	**Location ID:**	W17-N
Collectors:	ML, LT	**Lat/Long:**	44.6234 -68.8553
Media:	Whole Body (WB)	**Weather:**	70s clear
Species:	Terrestrial Insect (TIN)	**Collection Method:**	White Sheet and Lights at Night

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
W17-N _ 071916 _TIN_WB_ 01	19:18	31	2.0		
W17-N _ 071916 _TIN_WB_ 02	19:30	26	2.0		
W17-N _ 071916 _TIN_WB_ 03	20:20	42	2.0		
W17-N _ 071916 _TIN_WB_ 04	20:22	27	2.0		
W17-N _ 071916 _TIN_WB_ 05	20:56	13	2.0		
_					
_					
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_					
_					
_					

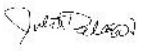
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	W17-N _ 112296 _TIN_WB_MS_ 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	W17-N _ 112296 _TIN_WB_MMD 01
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

amec foster wheeler

SAMPLE COLLECTION LOG
TERRESTRIAL INSECT WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072016	**Location ID:**	MMSE-1
Collectors:	LT, ML	**Lat/Long:**	44.590689 -68.85956
Media:	Whole Body (WB)	**Weather:**	80 sunny breezy
Species:	Terrestrial Insect (TIN)	**Collection Method:**	Butterfly nets

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMSE-1 _ 072016 _TIN_WB_ 01	11:34	NR	2.9		
MMSE-1 _ 072016 _TIN_WB_ 02	12:02	NR	2.4		
MMSE-1 _ 072016 _TIN_WB_ 03	12:31	NR	2.6		
MMSE-1 _ 072016 _TIN_WB_ 04	13:01	NR	3.2		
MMSE-1 _ 072016 _TIN_WB_ 05	14:10	NR	3.1		
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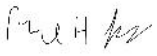
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions: NR = Not Recorded

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
TERRESTRIAL INSECT WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072116	**Location ID:**	ADD-01
Collectors:	DL, ML	**Lat/Long:**	44.643517 -67.718950
Media:	Whole Body (WB)	**Weather:**	70°F, sunny, clear skies
Species:	Terrestrial Insect (TIN)	**Collection Method:**	Butterfly Nets

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
ADD-01 _ 072116 _TIN_WB_ 01	09:50	NR	2.2		
ADD-01 _ 072116 _TIN_WB_ 02	10:30	NR	2.2		
ADD-01 _ 072116 _TIN_WB_ 03	12:15	NR	2.2		
ADD-01 _ 072116 _TIN_WB_ 04	12:30	NR	2.2		
ADD-01 _ 072116 _TIN_WB_ 05	14:48	NR	2.4		
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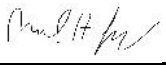
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP; SOP S-11 Spider and Insect Sampling

Additional Questions: NR = Not Recorded

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
SPIDER WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071216	**Location ID:**	MMSW-C
Collectors:	Mike LounsburyLauren Tierney	**Lat/Long:**	-68.5678 44.2354
Media:	Whole Body (WB)	**Weather:**	Sunny clear
Species:	Spider (SPI)	**Collection Method:**	Tweezers, Broom

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMSW-C _ 071216 _SPI_WB_ 1	18:37	12	36.0	3	
MMSW-C _ 071216 _SPI_WB_ 2	18:39	1	18.0	3	
MMSW-C _ 071216 _SPI_WB_ 7	08:46	9	10.0	5	
MMSW-C _ 071216 _SPI_WB_ 9	08:47	50	13.0	5	
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene Jar

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	MMSW-C _ 071216 _SPI_WB_MS 07
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	MMSW-C _ 071216 _SPI_WB_MD 07
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

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SAMPLE COLLECTION LOG
SPIDER WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072116	**Location ID:**	ADD-01
Collectors:	DL, ML	**Lat/Long:**	44.643517 -67.71895
Media:	Whole Body (WB)	**Weather:**	75°F
Species:	Spider (SPI)	**Collection Method:**	Tweezers

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
ADD-01 _ 072116 _SPI_WB_ 01	14:53	NR	2.3		
ADD-01 _ 072116 _SPI_WB_ 02	14:55	NR	2.1		
ADD-01 _ 072116 _SPI_WB_ 03	14:56	NR	2.4		
ADD-01 _ 072116 _SPI_WB_ 04	15:14	NR	2.3		
ADD-01 _ 072116 _SPI_WB_ 05	15:46	NR	2.4		
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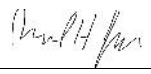
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions: NR = Not Recorded

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
SPIDER WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072216	**Location ID:**	MMSE-1
Collectors:	DL, ML	**Lat/Long:**	44.590689 -68.85956
Media:	Whole Body (WB)	**Weather:**	65°F, overcast and windy; thunderstorms expected
Species:	Spider (SPI)	**Collection Method:**	Tweezers

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMSE-1 _ 072216 _SPI_WB_ 01	08:30	75	2.5		
MMSE-1 _ 072216 _SPI_WB_ 02	09:00	30	2.2		
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
SPIDER WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072316	**Location ID:**	MMSE-1
Collectors:	VM, JFG, LSV	**Lat/Long:**	44.590689 -68.85956
Media:	Whole Body (WB)	**Weather:**	Sunny, 70s and warming, partly cloudy
Species:	Spider (SPI)	**Collection Method:**	Tweezers

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMSE-1 _ 072316 _SPI_WB_ 03	15:15	over 50	2.02		
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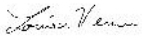
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
SPIDER WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072616	**Location ID:**	MMSE-1
Collectors:	JP	**Lat/Long:**	44.590689 -68.85956
Media:	Whole Body (WB)	**Weather:**	80 F sunny
Species:	Spider (SPI)	**Collection Method:**	Tweezers

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMSE-1 _ 072616 _SPI_WB_ 04	13:32	30	0.7	1 photo taken	composited from multiple MMSE jars
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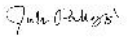
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
SPIDER WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072616	**Location ID:**	MMSW-C
Collectors:	JP	**Lat/Long:**	44.5801 -68.8609
Media:	Whole Body (WB)	**Weather:**	80 F sunny
Species:	Spider (SPI)	**Collection Method:**	Tweezers

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMSW-C _ 072616 _SPI_WB_ 03	13:50	30	1.7	1 photo taken	composited from multiple MMSW jars
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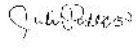
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
SPIDER WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072616	**Location ID:**	W17-N
Collectors:	JP	**Lat/Long:**	44.6234 -68.8553
Media:	Whole Body (WB)	**Weather:**	80 F Sunny
Species:	Spider (SPI)	**Collection Method:**	Tweezers

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
W17-N _ 072616 _SPI_WB_ 01	13:30	20	2.8	1 photo	Sample composited from multiple W17-N jars to reach target weight
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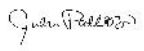
Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Spider and terrestrial insect sampling was conducted according to the following SOP included in the QAPP;
SOP S-11 Spider and Insect Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

Bird Banding Data Form

Project Name: USDC Penobscot River | **Project Number:** 3616166052.04.05

Starting Band Number: 251145014 | **Banders name(s) and initials:** LSV, JFG

Band Size: | **Page:** 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145014	NESP	071916	MMSW-C	10:10	1 = AHY	S = Skull	F = Female	B = Brood Patch	0 = None	0 = None	56.0	48.0	16.6	JFG	4	
251145015	NESP	071916	MMSW-C	13:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	50.0	16.9	JFG	9	
239177009	NESP	071916	MMSW-C	14:52	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	47.0	17.2		8	Recap; right silver, left red over blue color banded

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	251145014	**Banders name(s) and initials:**	LSV, JFG
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145014	NESP	071916	MMSW-C	10:10	6 = Complete	4 = Wrinkled								JFG	4	
251145015	NESP	071916	MMSW-C	13:30			3 = Large							JFG	9	
239177009	NESP	071916	MMSW-C	14:52			3 = Large								8	Recap; right silver, left red over blue color banded

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071916	**Location ID:**	MMSW-C
Collectors:	LSV, JFG	**Weather:**	Sunny, breezy to windy, 70s

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	12	06:28	44.5814	68.86083	12:25
2	12	06:31	44.58144	68.86066	12:50
3	9	06:40	44.58162	68.86058	14:30
4	6	06:44	44.58162	68.86058	14:35
5	9	06:50	44.58059	68.86001	11:25
6	6	06:57	44.58056	68.86021	14:40
7	9	11:30	44.58048	68.8621	14:43
8	12	12:30	44.58172	68.85902	14:50
9	12	12:58	44.58168	68.85886	14:55

Sampler Signature: _____

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071916	**Location ID:**	MMSW-C
Collectors:	LSV, JFG	**SPC (X/Y); Lat/Long:**	44.58162 68.86058
Media:	Blood (BL)	**Weather:**	Sunny, breezy to windy, 70s
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSW-C _ 071916 _ NSS _BL_ 01	10:10	251145014	NESP	16.6	2	4	JFG	LSV bleed
MMSW-C _ 071916 _ NSS _BL_ 02	13:30	251145015	NESP	16.9	2	9	JFG	LSV bleed
MMSW-C _ 071916 _ NSS _BL_ 03	15:17	239177009	NESP	17.2	3	8		LSV bleed, recap from others, single silver right, left red over blue
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	MMSW-C _ 071916 _ NSS _BL_I03
QC Sample Types:	MS	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: _____

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 185140310

Banders name(s) and initials: EM, VM, MKM

Band Size:

Page: 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
185140310	NESP	071916	W17-N	09:20	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	56.0	48.0	17.5	EM	6	Band size 1
185140311	NESP	071916	W17-N	09:50	2 = HY	S = Skull	U = Unknown	X = Not attempted	2 = Light	0 = None	55.0	48.0	15.1	EM	2	Band size 1
185140312	NESP	071916	W17-N	10:20	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	47.0	17.8	SJM	5	Band size 1
185140313	NESP	071916	W17-N	10:20	1 = AHY	N = Molt Limits Absent	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	51.0	17.4	EM	6	Band size 1
274146530	NESP	071916	W17-N	08:50	2 = HY	S = Skull	U = Unknown	X = Not attempted	0 = None	1 = Trace	57.0	46.0	17.2	SJM	3	Band size 1B
274146533	NESP	071916	W17-N	13:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	1 = Trace	0 = None	59.0	52.0	18.3	EM	2	Band size 1B
99177931	RWBL	071916	W17-N	11:30	1 = AHY	1 = Adult Plumage	F = Female	1 = Adult Plumage	0 = None	0 = None	97.0	77.0	37.3	SJM	4	Band size 1A, leading zero on band #
251118716	NESP	071916	W17-N	06:50	1 = AHY	N = Molt Limits Absent	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	49.0	17.3	SJM	2	Already banded, recap

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name: USDC Penobscot River
Project Number: 3616166052.04.05
Starting Band Number: 185140310
Banders name(s) and initials: EM, VM, MKM
Band Size:
Page: 2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
185140310	NESP	071916	W17-N	09:20			3 = Large							EM	6	Band size 1
185140311	NESP	071916	W17-N	09:50	1 = Trace									EM	2	Band size 1
185140312	NESP	071916	W17-N	10:20			3 = Large							SJM	5	Band size 1
185140313	NESP	071916	W17-N	10:20			3 = Large							EM	6	Band size 1
274146530	NESP	071916	W17-N	08:50	1 = Trace									SJM	3	Band size 1B
274146533	NESP	071916	W17-N	13:00			3 = Large							EM	2	Band size 1B
99177931	RWBL	071916	W17-N	11:30		3 = Heavy								SJM	4	Band size 1A, leading zero on band #
251118716	NESP	071916	W17-N	06:50			3 = Large							SJM	2	Already banded, recap

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071916	**Location ID:**	W17-N
Collectors:	EM, VM, MKM	**Weather:**	Partly cloudy, slight breeze, 70s

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	9	06:20	44.624601	68.885277	14:00
2	12	06:30	44.624601	68.852773	14:00
3	12	06:40	44.624168	68.85303	14:00
4	6	06:50	44.623974	68.853187	14:00
5	9	07:00	44.623978	68.854985	14:00
6	6	06:40	44.623499	68.854959	14:00

Sampler Signature:

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071916	**Location ID:**	W17-N
Collectors:	EM, VM, MKM	**SPC (X/Y); Lat/Long:**	68.853378 44.623652
Media:	Blood (BL)	**Weather:**	Partly cloudy, slight breeze, 70s
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
W17-N _ 071916 _ NSS _BL_ 01	06:50	251118716	NESP	17.3	1	2	SJM	Already had band
W17-N _ 071916 _ NSS _BL_ 02	08:50	274146530	NESP	17.2	1	3	SJM	
W17-N _ 071916 _ NSS _BL_ 03	09:20	185140310	NESP	17.5	1	6	EM	
W17-N _ 071916 _ NSS _BL_ 04	09:50	185140311	NESP	15.1	2	2	EM	Capillary tubes partially full - used 2 due to clotting
W17-N _ 071916 _ NSS _BL_ 05	10:20	185140312	NESP	17.8	1	5	SJM	
W17-N _ 071916 _ NSS _BL_ 08	10:20	185140313	NESP	17.4	1	6	EM	
W17-N _ 071916 _ NSS _BL_ 11	13:00	274146533	NESP	18.3	2	2	EM	MS/MSD collected
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	W17-N _ 071916 _ NSS _BL_MS_ 11
QC Sample Types:	MS,MSD	If yes, MSD sample ID:	W17-N _ 071916 _ NSS _BL_MD_ 11
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	071916	**Location ID:**	W17-N
Collectors:	EM, VM, MKM	**SPC (X/Y); Lat/Long:**	68.853378 44.623652
Media:	Blood (BL)	**Weather:**	Partly cloudy, slight breeze, 70s
Species:	Red-Winged Blackbird (RWB)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
W17-N _ 071916 _ RWB _BL_ 01	11:30	99177931	RWBL	37.3	1	4	SJM	Leading zero on band #
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	251145016	**Banders name(s) and initials:**	LSV, JFG, EM
Band Size:		**Page:**	1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145016	NESP	072016	MMSW-C	07:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	57.0	49.0	17.1	EM	3	EMM bleed, 2 quarter vials
251145017	NESP	072016	MMSW-C	07:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	1 = Trace	0 = None	55.0	48.0	17.5	EM	1	LSV bleed
251145018	NESP	072016	MMSW-C	07:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	1 = Trace	0 = None	58.0	50.0	17.3	JFG	4	LSV bleed
251145019	NESP	072016	MMSW-C	08:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	50.0		JFG	5	LSV bleed, bird escaped when trying to weigh

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	251145016	**Banders name(s) and initials:**	LSV, JFG, EM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145016	NESP	072016	MMSW-C	07:00			3 = Large							EM	3	EMM bleed, 2 quarter vials
251145017	NESP	072016	MMSW-C	07:30			3 = Large							EM	1	LSV bleed
251145018	NESP	072016	MMSW-C	07:30			3 = Large							JFG	4	LSV bleed
251145019	NESP	072016	MMSW-C	08:30			3 = Large							JFG	5	LSV bleed, bird escaped when trying to weigh

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072016	**Location ID:**	MMSW-C
Collectors:	LSV, JFG, EM	**Weather:**	Sunny, light breeze, warming from 60s

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	9	06:20	44.58163	68.86057	12:25
2	6	06:23	44.58163	68.86057	12:25
3	12	06:30	44.58173	68.85901	12:20
4	12	06:35	44.58168	68.85885	12:15
5	9	06:42	44.88199	68.85941	12:13
6	6	06:44	44.58215	68.85981	12:10

Sampler Signature:

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072016	**Location ID:**	MMSW-C
Collectors:	LSV, JFG, EM	**SPC (X/Y); Lat/Long:**	68.86220 44.58080
Media:	Blood (BL)	**Weather:**	Sunny, light breeze, warming from 60s
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSW-C _ 072016 _ NSS _BL_ 04	07:00	251145016	NESP	17.1	2	3	EM	
MMSW-C _ 072016 _ NSS _BL_ 07	07:30	251145017	NESP	17.5	1	1	EM	
MMSW-C _ 072016 _ NSS _BL_ 05	07:30	251145018	NESP	17.3	2	4	JFG	
MMSW-C _ 072016 _ NSS _BL_ 06	08:57	251145019	NESP		2	5	JFG	Bird escaped while attempting to weigh
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: _____

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 274146534

Banders name(s) and initials: EM, VM, MKM

Band Size:

Page: 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
274146534	NESP	072016	W17-N	07:10	2 = HY	2 = Juvenal Plumage	U = Unknown	2 = Juvenal Plumage	0 = None	1 = Trace	57.0	46.0	15.9	SJM	2	Band size 1B
274146535	NESP	072016	W17-N	07:10	2 = HY	2 = Juvenal Plumage	U = Unknown	2 = Juvenal Plumage	0 = None	1 = Trace	56.0	48.0	15.3	SJM	2	Band size 1B
274146536	NESP	072016	W17-N	07:10	2 = HY	2 = Juvenal Plumage	U = Unknown	2 = Juvenal Plumage	0 = None	1 = Trace	56.0	48.0	15.8	SJM	2	Band size 1B
185140319	NESP	072016	W17-N	11:15	2 = HY	2 = Juvenal Plumage	U = Unknown	2 = Juvenal Plumage	0 = None	0 = None	55.0	45.0	14.9	SJM	3	Band size 1
99177932	RWBL	072016	W17-N	11:37	2 = HY	S = Skull	F = Female	1 = Adult Plumage	0 = None	0 = None	111.0	78.0	50.5	SJM	9	Band size 1A
92222668	RWBL	072016	W17-N	11:48	1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	1 = Trace	0 = None	118.0	91.0	66.0	SJM	9	Band size 2
185140320	NESP	072016	W17-N	13:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	59.0	51.0	18.2	SJM	9	Band size 1

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	274146534	**Banders name(s) and initials:**	EM, VM, MKM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
274146534	NESP	072016	W17-N	07:10										SJM	2	Band size 1B
274146535	NESP	072016	W17-N	07:10										SJM	2	Band size 1B
274146536	NESP	072016	W17-N	07:10										SJM	2	Band size 1B
185140319	NESP	072016	W17-N	11:15										SJM	3	Band size 1
99177932	RWBL	072016	W17-N	11:37	2 =									SJM	9	Band size 1A
92222668	RWBL	072016	W17-N	11:48										SJM	9	Band size 2
185140320	NESP	072016	W17-N	13:00										SJM	9	Band size 1

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072016	**Location ID:**	W17-N
Collectors:	EM, VM, MKM	**Weather:**	Sunny, 80s

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
7	12	06:45	44.623255	68.853624	14:00
8	6	06:50	44.622675	68.854097	14:00
9	9	07:00	44.624405	68.85425	14:00
2	12	07:05	44.624601	68.852773	14:00
3	12	07:10	44.624168	68.85303	14:00

Sampler Signature:

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072016	**Location ID:**	W17-N
Collectors:	EM, VM, MKM	**SPC (X/Y); Lat/Long:**	68.853378 44.623652
Media:	Blood (BL)	**Weather:**	Sunny, 80s
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
W17-N _ 072016 _ NSS _BL_ 07	07:10	274146534	NESP	15.9	2	2	SJM	
W17-N _ 072016 _ NSS _BL_ 14	07:10	274146535	NESP	15.3	2	2	SJM	
W17-N _ 072016 _ NSS _BL_ 06	07:10	274146536	NESP	15.8	1	2	SJM	
W17-N _ 072016 _ NSS _BL_ 09	11:15	185140319	NESP	14.9	3	3	SJM	
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: [signature]

Reviewed by: Lauren Tierney
Date: 5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072016	**Location ID:**	W17-N
Collectors:	EM, VM, MKM	**SPC (X/Y); Lat/Long:**	68.853378 44.623652
Media:	Blood (BL)	**Weather:**	Sunny, 80s
Species:	Red-Winged Blackbird (RWB)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
W17-N _ 072016 _ RWB _BL_ 02	11:37	99177932	RWBL	50.5	4	9	SJM	Band size 1A
W17-N _ 072016 _ RWB _BL_ 03	11:48	92222668	RWBL	66.0	3	9	SJM	Band size 2
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:		If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: [signature]

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River | **Project Number:** 3616166052.04.05

Starting Band Number: 251145023 | **Banders name(s) and initials:** LSV, JFG, EM

Band Size: | **Page:** 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145023	NESP	072116	ADD-01	09:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	56.0	47.0	16.4	EM	7	
251145024	NESP	072116	ADD-01	11:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	56.0	47.0	18.1	EM	5	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	251145023	**Banders name(s) and initials:**	LSV, JFG, EM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145023	NESP	072116	ADD-01	09:00			3 = Large							EM	7	
251145024	NESP	072116	ADD-01	11:00			3 = Large							EM	5	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072116	**Location ID:**	ADD-01
Collectors:	LSV, JFG, EM	**Weather:**	Sunny, clear, warming

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	12	06:15	44.64347	67.71768	09:25
2	12	06:22	44.64326	67.71844	08:10
3	9	06:30	44.64444	67.71777	09:50
4	6	06:42	44.64392	67.71872	12:40
5	9	06:59	44.64436	67.72019	13:00
6	9	07:08	44.64417	67.72047	12:55
7	12	08:20	44.64365	67.72062	12:40
8	12	09:40	44.64331	67.71922	12:35
9	9	10:05	44.64482	67.72035	12:30

Sampler Signature: Jennifer Vennie

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072116	**Location ID:**	ADD-01
Collectors:	LSV, JFG, EM	**SPC (X/Y); Lat/Long:**	67.71902 44.64350
Media:	Blood (BL)	**Weather:**	Sunny, clear, warming
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
ADD-01 _ 072116 _ NSS _BL_ 01	09:19	251145023	NESP	16.4	2	7	EM	LSV bleed, left wing would not bleed but got an eighth of a capillary, 1 tube from right wing
ADD-01 _ 072116 _ NSS _BL_ 02	11:15	251145024	NESP	18.1	2	5	EM	LSV bleed
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: Louise Verne

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 192024124

Banders name(s) and initials: JFG, KCB, MKM

Band Size:

Page: 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
192024124	Coye	072116	MMSE-1	08:00	1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	1 = Trace	0 = None	56.0	51.0	10.8	SJM	2	
185140321	NESP	072116	MMSE-1	07:20	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	1 = Trace	1 = Trace	58.0	48.0	18.3	SJM	3	
185140322	NESP	072116	MMSE-1	07:20	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	56.0	51.0	16.9	SJM	3	
185140323	NESP	072116	MMSE-1	07:20	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	57.0	49.0	16.2	SJM	3	
185140324	Savs	072116	MMSE-1	07:20	2 = HY	S = Skull	U = Unknown	X = Not attempted	0 = None	1 = Trace	70.0	53.0	17.4	SJM	3	
185140325	NESP	072116	MMSE-1	08:00	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	0 = None	0 = None	55.0	46.0	17.4	SJM	1	
274146545	Sosp	072116	MMSE-1	08:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	0 = None	67.0	68.0	21.0	SJM	3	
274146546	Sosp	072116	MMSE-1	08:20	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	0 = None	64.0	65.0	20.9	SJM	2	
185140326	NESP	072116	MMSE-1	10:40	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	0 = None	0 = None	54.0	45.0	17.9	SJM	2	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	192024124	**Banders name(s) and initials:**	JFG, KCB, MKM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
192024124	Coye	072116	MMSE-1	08:00										SJM	2	
185140321	NESP	072116	MMSE-1	07:20			3 = Large							SJM	3	
185140322	NESP	072116	MMSE-1	07:20			3 = Large							SJM	3	
185140323	NESP	072116	MMSE-1	07:20			3 = Large							SJM	3	
185140324	Savs	072116	MMSE-1	07:20	3 = Half									SJM	3	
185140325	NESP	072116	MMSE-1	08:00		4 = Wrinkled								SJM	1	
274146545	Sosp	072116	MMSE-1	08:00										SJM	3	
274146546	Sosp	072116	MMSE-1	08:20										SJM	2	
185140326	NESP	072116	MMSE-1	10:40		4 = Wrinkled								SJM	2	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072116	**Location ID:**	MMSE-1
Collectors:	JFG, KCB, MKM	**Lat/Long:**	44.590689 -68.85956
Media:	Blood (BL)	**Weather:**	Sunny, 80
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSE-1 _ 072116 _ NSS _BL_ 01	07:30	185140321	NESP	18.3	3	3	SJM	
MMSE-1 _ 072116 _ NSS _BL_ 02	07:35	185140322	NESP	16.9	2	3	SJM	
MMSE-1 _ 072116 _ NSS _BL_ 05	07:45	185140323	NESP	16.2	2	3	SJM	
MMSE-1 _ 072116 _ NSS _BL_ 03	08:05	185140325	NESP	17.4	3	1	SJM	
MMSE-1 _ 072116 _ NSS _BL_ 04	10:40	185140326	NESP	17.9	2	3	SJM	
MMSE-1 _ 072116 _ NSS _BL_ 08	11:30	185140327	NESP	16.3	2	6	SJM	
MMSE-1 _ 072116 _ NSS _BL_ 06	11:15	185140328	NESP	18.2	2	6	SJM	
MMSE-1 _ 072116 _ NSS _BL_ 07	11:20	185140329	NESP	17.5	2	6	SJM	
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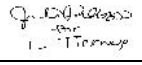
Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

Bird Banding Data Form

Project Name: USDC Penobscot River | **Project Number:** 3616166052.04.05

Starting Band Number: 251145027 | **Banders name(s) and initials:** LSV, JFG, VM

Band Size: | **Page:** 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145027	NESP	072216	ADD-01	08:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	56.0		17.1	JFG	4	LSV bled
251145030	NESP	072216	ADD-01	09:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	48.0	17.1	JFG	3	LSV bled
251145031	NESP	072216	ADD-01	10:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	46.0	16.7	JFG	4	LSV bled

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

Bird Banding Data Form

Project Name: USDC Penobscot River
Project Number: 3616166052.04.05
Starting Band Number: 251145027
Banders name(s) and initials: LSV, JFG, VM
Band Size:
Page: 2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145027	NESP	072216	ADD-01	08:30			3 = Large							JFG	4	LSV bled
251145030	NESP	072216	ADD-01	09:30			3 = Large							JFG	3	LSV bled
251145031	NESP	072216	ADD-01	10:00			3 = Large							JFG	4	LSV bled

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072216	**Location ID:**	ADD-01
Collectors:	LSV, JFG, VM	**Weather:**	Mostly cloudy, cool, damp, faint breeze

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	12	06:12	44.64331	67.71917	13:13
2	6	06:26	44.64351	67.72033	13:10
3	12	06:14	44.64374	67.72069	13:05
4	9	06:17	44.64416	67.72049	12:58
5	6	06:25	44.64436	67.7202	12:55
6	9	06:27	44.64482	67.72035	16:12

Sampler Signature: Louise Vernon

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072216	**Location ID:**	ADD-01
Collectors:	LSV, JFG, VM	**SPC (X/Y); Lat/Long:**	67.71903 44.64351
Media:	Blood (BL)	**Weather:**	Mostly cloudy, cool, damp, faint breeze
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
ADD-01 _ 072216 _ NSS _BL_ 03	08:45	251145027	NESP	17.1	2	4	JFG	782 LSV bled
ADD-01 _ 072216 _ NSS _BL_ 04	09:42	251445030	NESP	17.1	4	3	JFG	783 LSV bled
ADD-01 _ 072216 _ NSS _BL_ 05	10:20	251145031	NESP	16.7	2	4	JFG	784 LSV bled
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ADD-01 _ 072216 _ NSS _BL_MS_ 04
QC Sample Types:	MS,MSD	If yes, MSD sample ID:	ADD-01 _ 072216 _ NSS _BL_MD_ 04
Were samples frozen?	Yes		

Sampler Signature: Louise Vernue

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River | **Project Number:** 3616166052.04.05

Starting Band Number: 235107562 | **Banders name(s) and initials:** SJM, EM

Band Size: | **Page:** 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
235107562	NESP	072216	MMSE-1	09:23	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	1 = Trace	0 = None	57.0	50.0	18.3	SJM	4	Band size 1
251118707	NESP	072216	MMSE-1	10:24	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	56.0	44.0	18.3	SJM	1	Band size 1; foreign recap

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

Bird Banding Data Form

Project Name: USDC Penobscot River
Project Number: 3616166052.04.05
Starting Band Number: 235107562
Banders name(s) and initials: SJM, EM
Band Size:
Page: 2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
235107562	NESP	072216	MMSE-1	09:23			3 = Large							SJM	4	Band size 1
251118707	NESP	072216	MMSE-1	10:24			3 = Large							SJM	1	Band size 1; foreign recap

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072216	**Location ID:**	MMSE-1
Collectors:	SJM, EM	**Weather:**	65°F, overcast and windy, thunderstorms expected later

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	12	05:45	44.590331	68.858502	13:30
2	9	05:45	44.59006	68.85791	13:31
3	12	05:45	44.589962	68.857921	13:30
4	6	05:45	44.589672	68.858995	13:32
5	9	05:44	44.589617	68.859437	13:38
6	6	05:45	44.590662	68.859098	13:33

Sampler Signature: 

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072216	**Location ID:**	MMSE-1
Collectors:	SJM, EM	**SPC (X/Y); Lat/Long:**	68.859560 44.590689
Media:	Blood (BL)	**Weather:**	65°F, overcast and windy, thunderstorms expected later
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSE-1 _ 072216 _ NSS _BL_ 09	09:23	235107562	NESP	18.3	2	4	SJM	
MMSE-1 _ 072216 _ NSS _BL_ 10	10:24	251118707	NESP	18.3	1	1	SJM	
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2016

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 251145034

Banders name(s) and initials: LSV, JFG, VM

Band Size:

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145034	NESP	072316	MMSE-1	07:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	0 = None	53.0	47.0	16.6	JFG	5	LSV bled
235107507	NESP	072316	MMSE-1	07:20	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	59.0	49.0	18.2		6	LSV bled
251145036	NESP	072316	MMSE-1	08:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	60.0	51.0	17.0	JFG	2	LSV bled
251145037	NESP	072316	MMSE-1	08:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	59.0	47.0	18.5	JFG	6	LSV bled
251145039	NESP	072316	MMSE-1	09:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	47.0	17.6	LSV	6	LSV bled
251145040	NESP	072316	MMSE-1	12:00	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	0 = None	0 = None	54.0	45.0	17.6	JFG	5	LSV bled
185140326	NESP	072316	MMSE-1	12:00	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	2 = Light	0 = None	54.0	47.0	18.4		6	no sample associated with this band

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name: USDC Penobscot River | **Project Number:** 3616166052.04.05

Starting Band Number: 251145034 | **Banders name(s) and initials:** LSV, JFG, VM

Band Size: | **Page:** 2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145034	NESP	072316	MMSE-1	07:00	NA	NA								JFG	5	LSV bled
235107507	NESP	072316	MMSE-1	07:20	NA	NA	3 = Large								6	LSV bled
251145036	NESP	072316	MMSE-1	08:30	NA	NA	3 = Large							JFG	2	LSV bled
251145037	NESP	072316	MMSE-1	08:30	NA	NA	3 = Large							JFG	6	LSV bled
251145039	NESP	072316	MMSE-1	09:00	NA	NA	3 = Large							LSV	6	LSV bled
251145040	NESP	072316	MMSE-1	12:00	NA	4 = Wrinkled	NA							JFG	5	LSV bled
185140326	NESP	072316	MMSE-1	12:00	NA	1 = Smooth	NA								6	LSV bled

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072316	**Location ID:**	MMSE-1
Collectors:	LSV, JFG, VM	**Weather:**	Clearing, damp, 70F

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	6	05:40	44.58951	68.85957	12:50
2	9	05:50	44.58967	68.85884	12:40
3	12	05:55	44.58839	68.85841	12:00
4	6	06:05	44.58884	68.85795	11:10
5	9	06:19	44.58883	68.85714	13:00
6	12	06:18	44.58918	68.85675	12:10
7	6	11:22	44.58967	68.85838	12:30

Sampler Signature:

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072316	**Location ID:**	MMSE-1
Collectors:	LSV, JFG, VM	**SPC (X/Y); Lat/Long:**	-68.85835 44.58913
Media:	Blood (BL)	**Weather:**	Clearing, damp, 70F
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSE-1 _ 072316 _ NSS _BL_ 11	07:21	251145034	NESP	16.6	2	5	JFG	LSV bled
MMSE-1 _ 072316 _ NSS _BL_ 12	07:45	235107507	NESP	18.2	3	6	JFG	LSV bled
MMSE-1 _ 072316 _ NSS _BL_ 13	08:30	251145036	NESP	17.0	3	2	JFG	LSV bled
MMSE-1 _ 072316 _ NSS _BL_ 14	08:45	251145037	NESP	18.5	2	6	JFG	LSV bled, one-eighth of tube for each of two
MMSE-1 _ 072316 _ NSS _BL_ 15	09:20	251145039	NESP	17.6	3	6	LSV	LSV bled
MMSE-1 _ 072316 _ NSS _BL_ 16	12:29	251145040	NESP	17.6	2	5	JFG	LSV bled
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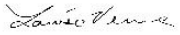
Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 185140339

Banders name(s) and initials: SJM, EM

Band Size:

Page: 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
185140339	NESP	072316	MMSW-C	08:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	68.0	47.0	17.8	EM	1	Blood sample taken
185140340	NESP	072316	MMSW-C	11:30	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	2 = Light	0 = None	53.0	44.0	15.5	SJM	5	Blood sample taken

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	185140339	**Banders name(s) and initials:**	SJM, EM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
185140339	NESP	072316	MMSW-C	08:30			3 = Large							EM	1	Blood sample taken
185140340	NESP	072316	MMSW-C	11:30		4 = Wrinkled								SJM	5	Blood sample taken

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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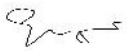
MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072316	**Location ID:**	MMSW-C
Collectors:	SJM, EM	**Weather:**	Sunny, breezy, no clouds, also Dave Lovejoy on crew

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	6	07:30	44.582323	68.858887	10:00
7	6	10:10	44.583084	68.859383	13:12
2	9	07:35	44.582363	68.860088	13:12
3	9	07:40	44.582159	68.86082	13:12
4	12	07:45	44.582559	68.861189	13:12
5	6	07:50	44.582543	68.860659	13:12
6	12	07:55	44.582702	68.859822	13:12

Sampler Signature: 

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072316	**Location ID:**	MMSW-C
Collectors:	SJM, EM	**SPC (X/Y); Lat/Long:**	68.859283 44.582819
Media:	Blood (BL)	**Weather:**	Sunny, breezy, no clouds, also Dave Lovejoy on crew
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSW-C _ 072316 _ NSS _BL_ 08	08:20	185140339	NESP	17.8	2	1	EM	
MMSW-C _ 072316 _ NSS _BL_ 10	11:49	185140340	NESP	15.5	2	5	SJM	
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature:

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	274146547	**Banders name(s) and initials:**	SJM, EM, MKM
Band Size:		**Page:**	1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
274146547	NESP	072416	MMSW-C	07:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	1 = Trace	58.0	51.0	16.2	EM	7	Too stressed to bleed
185140342	NESP	072416	MMSW-C	10:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	57.0		16.1	SJM	8	Blod sample taken

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	274146547	**Banders name(s) and initials:**	SJM, EM, MKM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
274146547	NESP	072416	MMSW-C	07:00										EM	7	Too stressed to bleed
185140342	NESP	072416	MMSW-C	10:00			3 = Large							SJM	8	Blod sample taken

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	3 = Almost Complete	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		4 = > 2/3	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		5 = Almost Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		6 = Complete					B = Body Injury
	L = Molt Limits Present		Y = Culmen			7 = Invisible					L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072416	**Location ID:**	MMSW-C
Collectors:	SJM, EM, MKM	**Weather:**	Clear, breezy cloudless

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
2	9	05:20	44.582363	68.860088	12:58
3	9	05:20	44.582159	68.86082	12:58
4	6	05:25	44.582559	68.861189	12:58
5	12	05:30	44.582543	68.860659	12:58
6	12	05:35	44.582702	68.856822	12:58
7	6	05:40	44.583084	68.859383	12:58
8	12	08:45	44.582955	68.860069	12:58
9	6	09:35	44.583135	68.859591	12:58
10	9	10:35	44.582526	68.858997	12:58

Sampler Signature: 

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072416	**Location ID:**	MMSW-C
Collectors:	SJM, EM, MKM	**SPC (X/Y); Lat/Long:**	68.859283 44.582819
Media:	Blood (BL)	**Weather:**	Clear, breezy cloudless
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSW-C _ 072416 _ NSS _BL_ 09	08:48	251145015	NESP	16.8	2	2	SJM	Foreign recapture
MMSW-C _ 072416 _ NSS _BL_ 11	10:12	185140342	NESP	16.1	2	8	SJM	
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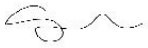
Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 251145043

Banders name(s) and initials: LSV, JFG, VM

Band Size:

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145043	NESP	072416	W17-N	09:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	1 = Trace	0 = None	58.0	48.0	16.1	LSV	7	LSV bled
185140313	NESP	072416	W17-N	10:00	1 = AHY	1 = Adult Plumage	U = Unknown	X = Not attempted	1 = Trace	0 = None	58.0	49.0	17.4	LSV	10	Previously bled
274146534	NESP	072416	W17-N	10:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	2 = Light	1 = Trace	57.0	44.0	16.3	LSV	10	Previously bled
251118716	NESP	072416	W17-N	11:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	57.0	49.0	17.9	JFG	11	Previously bled
251145044	NESP	072416	W17-N	13:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	0 = None	54.0	48.0	15.8	LSV	7	Did not bleed much

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	251145043	**Banders name(s) and initials:**	LSV, JFG, VM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145043	NESP	072416	W17-N	09:30			2 = Medium							LSV	7	LSV bled
185140313	NESP	072416	W17-N	10:00										LSV	10	Previously bled
274146534	NESP	072416	W17-N	10:00										LSV	10	Previously bled
251118716	NESP	072416	W17-N	11:00			3 = Large							JFG	11	Previously bled
251145044	NESP	072416	W17-N	13:00										LSV	7	Did not bleed much

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	3 = Almost Complete	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		4 = > 2/3	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		5 = Almost Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		6 = Complete					B = Body Injury
	L = Molt Limits Present		Y = Culmen			7 = Invisible					L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072416	**Location ID:**	W17-N
Collectors:	LSV, JFG, VM	**Weather:**	Sunny, 70s and warming, breeze picking up

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	12	05:40	44.62249	68.8541	12:30
2	9	05:20	44.62158	68.85458	08:15
3	12	05:17	44.6221	68.8547	07:30
4	9	05:25	44.62254	68.85539	08:50
5	6	05:30	44.62257	68.85476	09:45
6	6	05:40	44.62358	68.85496	08:00
7	12	07:45	44.62313	68.85419	13:20
8	6	08:10	44.62389	68.85435	13:00
9	9	08:45	44.62439	68.85426	13:20
10	9	09:15	44.62385	68.85373	13:10
11	6	10:00	44.62459	68.85461	13:10

Sampler Signature: 

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072416	**Location ID:**	W17-N
Collectors:	LSV, JFG, VM	**SPC (X/Y); Lat/Long:**	68.85382 44.62288
Media:	Blood (BL)	**Weather:**	Sunny, 70s and warming, breeze picking up
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
W17-N _ 072416 _ NSS _BL_ 12	09:40	251145043	NESP	16.1	3	7	LSV	859 One cap tube has very little blood, other two have good volume
W17-N _ 072416 _ NSS _BL_ 13	13:20	251145044	NESP	15.8	2	7	LSV	Bird did not bleed, one-third capillary from left wing, tiny amount from right wing, not enough volume for analysis
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: [signature]

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 185140343

Banders name(s) and initials: SJM, VM, MKM

Band Size:

Page: 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
185140343	Swsp	072516	ADD-09	07:30	5 = SY	L = Molt Limits Present	M = Male	C = Cloacal Protuberance	0 = None	0 = None	60.0	59.0	17.6	SJM	9	-week 2 data. Nets 5-6 from week1 sites, nets after number in order
185140344	NESP	072516	ADD-05	09:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	57.0	48.0	18.7			
345	Swspadd	072516	ADD-10	09:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	0 = None	56.0	55.0	13.5			
346	NESP	072516	ADD-10	12:00	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	1 = Trace	0 = None	53.0	44.0	15.5			
192024123	COYE	072516	ADD-09	13:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	1 = Trace	58.0	45.0	9.7			
185140347	SWSP	072516	ADD-09	13:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	59.0	58.0	17.0			
		072516														

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Starting Band Number:	185140343	**Banders name(s) and initials:**	SJM, VM, MKM
Band Size:		**Page:**	2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
185140343	Swsp	072516	ADD-09	07:30	3 = Half	0 = None	3 = Large							SJM	9	-week 2 data. Nets 5-6 from week1 sites, nets after number in order
185140344	NESP	072516	ADD-05	09:00	3 = Half	0 = None	3 = Large									
345	Swspadd	072516	ADD-10	09:00												
346	NESP	072516	ADD-10	12:00		4 = Wrinkled										
192024123	COYE	072516	ADD-09	13:00												
185140347	SWSP	072516	ADD-09	13:00												
		072516														

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	3 = Almost Complete	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		4 = > 2/3	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		5 = Almost Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		6 = Complete					B = Body Injury
	L = Molt Limits Present		Y = Culmen			7 = Invisible					L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072516	**Location ID:**	ADD-01
Collectors:	SJM, VM, MKM	**Weather:**	Not Recorded

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
5	12		44.643668	67.720662	
6	6		44.644116	67.720539	
7	9		44.644314	67.721387	
8	12		44.644626	67.721518	
9	9		44.644851	67.721321	
10	6		44.644811	67.720695	

Sampler Signature: _____

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072516	**Location ID:**	ADD-01
Collectors:	SJM, VM, MKM	**SPC (X/Y); Lat/Long:**	44.643668 67.720662
Media:	Blood (BL)	**Weather:**	Not recorded
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
ADD-01 _ 072516 _ NSS _BL_ 06	09:17	1850344	NESP	18.7	2	5	SJM	785
ADD-01 _ 072516 _ NSS _BL_ 07	12:20	1850346	NESP	15.5	2	10	SJM	786
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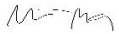
Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 251145051

Banders name(s) and initials: LSV, JFG, EM

Band Size:

Page: 1 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145051	NESP	072516	MMSE-1	10:10	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	52.0	50.0	16.7	JFG	1	EMM bleed
251145052	NESP	072516	MMSE-1	11:00	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	0 = None	0 = None	56.0	47.0		JFG	3	EMM bleed

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name: USDC Penobscot River
Project Number: 3616166052.04.05
Starting Band Number: 251145051
Banders name(s) and initials: LSV, JFG, EM
Band Size:
Page: 2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145051	NESP	072516	MMSE-1	10:10	NA	NA	3 = Large							JFG	1	EMM bleed
251145052	NESP	072516	MMSE-1	11:00	NA	4 = Wrinkled	NA							JFG	3	EMM bleed

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072516	**Location ID:**	MMSE-1
Collectors:	LSV, JFG, EM	**Weather:**	Sunny, warm, some breeze

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	6	10:10	44.59314	68.85944	11:20
2	12	09:53	44.59295	68.85993	11:25
3	6	10:30	44.59288	68.85978	11:22
4	9	10:00	44.59242	68.8597	11:30
5	12	10:05	44.59227	68.86007	11:34
6	9	10:15	44.59291	68.86031	11:30

Sampler Signature:

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072516	**Location ID:**	MMSE-1
Collectors:	LSV, JFG, EM	**SPC (X/Y); Lat/Long:**	68.86021 44.59319
Media:	Blood (BL)	**Weather:**	Sunny, warm, some breeze
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
MMSE-1 _ 072516 _ NSS _BL_ 17	10:30	251145051	NESP	16.7	3	1	JFG	1599
MMSE-1 _ 072516 _ NSS _BL_ 18	11:18	251145052	NESP		2	3	JFG	Second capillary tube has very little blood in it, bird not weighed
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Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: Louise Verney

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 251145045

Banders name(s) and initials: LSV, JFG, EM

Band Size:

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145045	NESP	072516	W17-N	05:20	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	0 = None	0 = None	54.0	46.0	14.6	JFG	4	LSV bleed
185140313	NESP	072516	W17-N	05:50											1	Recap, previously banded and bled
185140310	NESP	072516	W17-N	06:30											3	Recap, previously banded and bled
2511187	NESP	072516	W17-N	07:30	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	0 = None	0 = None	53.0	48.0	16.0	JFG	1	LSV bled
251145049	NESP	072516	W17-N	08:00	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	2 = Light	1 = Trace	56.0	50.0	15.6	EM	3	LSV bled
251145050	NESP	072516	W17-N	08:20	1 = AHY	1 = Adult Plumage	F = Female	B = Brood Patch	1 = Trace	0 = None	54.0	42.0	17.2	JFG	2	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

Bird Banding Data Form

Project Name: USDC Penobscot River
Project Number: 3616166052.04.05
Starting Band Number: 251145045
Banders name(s) and initials: LSV, JFG, EM
Band Size:
Page: 2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145045	NESP	072516	W17-N	05:20	1 = Trace	NA	NA							JFG	4	LSV bleed
185140313	NESP	072516	W17-N	05:50											1	Recap, previously banded and bled
185140310	NESP	072516	W17-N	06:30											3	Recap, previously banded and bled
2511187	NESP	072516	W17-N	07:30	NA	4 = Wrinkled	NA							JFG	1	LSV bled
251145049	NESP	072516	W17-N	08:00	NA	NA	NA							EM	3	LSV bled
251145050	NESP	072516	W17-N	08:20	NA	4 = Wrinkled	NA							JFG	2	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072516	**Location ID:**	W17-N
Collectors:	LSV, JFG, EM	**Weather:**	Mostly cloudy, cool

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	12	05:02	44.62315	68.85417	08:15
2	9	05:01	44.62384	68.85373	08:20
3	6	05:07	44.62394	68.85438	08:25
4	12	05:06	44.6244	68.85502	08:30
5	6	05:12	44.62457	68.8546	08:35
6	9	05:15	44.62438	68.85425	08:40

Sampler Signature: Lauren Verna

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072516	**Location ID:**	W17-N
Collectors:	LSV, JFG, EM	**SPC (X/Y); Lat/Long:**	68.85386 44.62288
Media:	Blood (BL)	**Weather:**	Mostly cloudy, cool
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
W17-N _ 072516 _ NSS _BL_ 10	05:30	251145045	NESP	14.6	2	4	JFG	LSV bled
W17-N _ 072516 _ NSS _BL_ 15	07:48	251118783	NESP	16.0	2	1	JFG	LSV bled
W17-N _ 072516 _ NSS _BL_ 16	08:19	251145050	NESP	17.2	2	3	JFG	LSV bled
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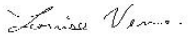
Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

Bird Banding Data Form

Project Name: USDC Penobscot River

Project Number: 3616166052.04.05

Starting Band Number: 251145024

Banders name(s) and initials: LSV, SJM, JFG, EM, VM, MKM

Band Size:

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Age[1]	How Aged[2]	Sex[3]	How Sexed[4]	Fat[5]	Body Molt[6]	Wing Chord (mm)	Tail Length (mm)	Weight (g)	Bander Initials	Net #	Notes
251145024	NESP	072616	ADD-01	08:30		X = Not Attempted					56.0	48.0	18.4	SJM	1	Recapture not bleed
251118754	NESP	072616	ADD-01	10:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	57.0	52.0	17.3	LSV	1	
185140353	NESP	072616	ADD-01	11:00	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	58.0	51.0	18.1	JFG	3	
185140354	NESP	072616	ADD-01	11:30	2 = HY	2 = Juvenal Plumage	U = Unknown	X = Not attempted	3 = half	1 = Trace	54.0		14.2	EM	5	Tail missing
185140356	NESP	072616	ADD-01	12:30	1 = AHY	1 = Adult Plumage	M = Male	C = Cloacal Protuberance	0 = None	0 = None	57.0	47.0	17.3	SJM	1	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY	1 = Adult Plumage	M = Male	1 = Adult Plumage	0 = None	0 = None	0 = None	0 = None	0 = None	N = None	0 = None	M = Malformed
2 = HY	2 = Juvenal Plumage	F = Female	2 = Juvenal Plumage	1 = Trace	1 = Trace	1 = Trace	1 = Smooth	1 = Small	A = Adventitous	1 = Slight	O = Old (healed) Injury
4 = Local	A = Nestling in nest, no flight feathers	U = Unknown	3 = Eye Color	2 = Light	2 = Light	2 = < 1/3	2 = Vascular	2 = Medium	S = Symmetric	2 = Light	I = Illness/Disease
5 = SY	B = Nestling in nest, flight feathers in pin	6 = Male sexed subsequently	B = Brood Patch	3 = half	3 = Medium	3 = Half	3 = Heavy	3 = Large	J = Juv Growth	3 = Moderate	S = Stress/Shock
6 = ASY	C = Nestling fledged, incapable of flight	7 = Female sexed subsequently	C = Cloacal Protuberance	4 = Filled	4 = Heavy	4 = > 2/3	4 = Wrinkled			4 = Heavy	E = Eye Injury
7 = TY	E = Eye color		E = Egg in Oviduct	5 = Bulging		5 = Almost Complete	5 = Molting			5 = Excessive	T = Tongue Injury
8 = ATY	F = Flight Feather Wear		W = Wing Chord	6 = Greatly Bulging		6 = Complete					W = Wing Injury
0 = Unknown	S = Skull		T = Tail Length	7 = Very Excessive		7 = Invisible					B = Body Injury
	L = Molt Limits Present		Y = Culmen								L = Leg Injury
	N = Molt Limits Absent		Z = Multiple Measurements								P = Predation
	P = Primary covert shape and/or primary feather shape/wear		X = Not attempted								D = Dead
	T = Tail Shape and Wear										
	X = Not Attempted										

Bird Banding Data Form

Project Name: USDC Penobscot River
Project Number: 3616166052.04.05
Starting Band Number: 251145024
Banders name(s) and initials: LSV, SJM, JFG, EM, VM, MKM
Band Size:
Page: 2 of 2

Band Number (9 digits - if band has 8 digits, place leading 0 at beginning)	Alpha Code (4 digits)	Date MMDDYY	Location ID	Time (24hr)	Skull[7]	Brood Patch[8]	Cloacal Prot[9]	Crown Patch	Culmen Length	Culmen Width	FF Molt[10]	FF Wear[11]	Condition[12]	Bander Initials	Net #	Notes
251145024	NESP	072616	ADD-01	08:30										SJM	1	Recapture not bleed
251118754	NESP	072616	ADD-01	10:00			3 = Large							LSV	1	
185140353	NESP	072616	ADD-01	11:00			3 = Large							JFG	3	
185140354	NESP	072616	ADD-01	11:30			3 = Large							EM	5	Tail missing
185140356	NESP	072616	ADD-01	12:30			3 = Large							SJM	1	

NOTES:

AGE[1]	HOW AGED[2]	SEX[3]	HOW SEXED[4]	FAT[5]	BODY MOLT[6]	SKULL[7]	BR PATCH[8]	CLOACAL PROTUBERANCE[9]	FF MOLT[10]	FF WEAR[11]	CONDITION[12]
1 = AHY 2 = HY 4 = Local 5 = SY 6 = ASY 7 = TY 8 = ATY 0 = Unknown	1 = Adult Plumage 2 = Juvenal Plumage A = Nestling in nest, no flight feathers B = Nestling in nest, flight feathers in pin C = Nestling fledged, incapable of flight E = Eye color F = Flight Feather Wear S = Skull L = Molt Limits Present N = Molt Limits Absent P = Primary covert shape and/or primary feather shape/wear T = Tail Shape and Wear X = Not Attempted	M = Male F = Female U = Unknown 6 = Male sexed subsequently 7 = Female sexed subsequently	1 = Adult Plumage 2 = Juvenal Plumage 3 = Eye Color B = Brood Patch C = Cloacal Protuberance E = Egg in Oviduct W = Wing Chord T = Tail Length Y = Culmen Z = Multiple Measurements X = Not attempted	0 = None 1 = Trace 2 = Light 3 = half 4 = Filled 5 = Bulging 6 = Greatly Bulging 7 = Very Excessive	0 = None 1 = Trace 2 = Light 3 = Medium 4 = Heavy	0 = None 1 = Trace 2 = < 1/3 3 = Half 4 = > 2/3 5 = Almost Complete 6 = Complete 7 = Invisible	0 = None 1 = Smooth 2 = Vascular 3 = Heavy 4 = Wrinkled 5 = Molting	0 = None 1 = Small 2 = Medium 3 = Large	N = None A = Adventitous S = Symmetric J = Juv Growth	0 = None 1 = Slight 2 = Light 3 = Moderate 4 = Heavy 5 = Excessive	M = Malformed O = Old (healed) Injury I = Illness/Disease S = Stress/Shock E = Eye Injury T = Tongue Injury W = Wing Injury B = Body Injury L = Leg Injury P = Predation D = Dead

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MIST NET LOG
GPS COORDINATES

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072616	**Location ID:**	ADD-01
Collectors:	LSV, SJM, JFG, EM, VM, MKM	**Weather:**	Foggy till 0915 sun comes out after

Net Number	Net Length (m)	Time Opened	SPC X Coordinate	SPC Y Coordinate	Time Closed
1	6	06:25	44.64331	67.71921	
2	12	06:30	44.64333	67.71977	
3	12	06:32	44.64374	67.72066	
4	6	06:34	44.64434	67.72142	
5	9		44.64434	67.72142	
6	12		44.64465	67.72147	
7	9		44.64489	67.72117	
8	6		44.64482	67.72067	
9	12		44.64434	67.72142	
10	9		44.64556	67.72005	
11	6		44.64489	67.72028	
12			44.64451	67.72028	

Sampler Signature:

Reviewed by: Lauren Tierney
5/12/2017

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SAMPLE COLLECTION LOG
BIRD BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072616	**Location ID:**	ADD-01
Collectors:	LSV, SJM, JFG, EM, VM, MKM	**SPC (X/Y); Lat/Long:**	44.64333 67.71977
Media:	Blood (BL)	**Weather:**	Foggy till 0915 sun comes out after
Species:	Nelson's Sparrow (NSS)	**Collection Method:**	Mist Net

Sample ID	Time	Band Number	4 Digit Alpha Species Code	Weight (grams)	Number of Hg Capillary Tubes	Mist Net Number	Bander Initials	Notes
ADD-01 _ 072616 _ NSS _BL_ 08	10:18	251118754	NESP	17.3	3	1	LSV	Third tube only partial full
ADD-01 _ 072616 _ NSS _BL_ 10	11:10	185140353	NESP	18.1	3	3	LSV	
ADD-01 _ 072616 _ NSS _BL_ 09	11:53	185140354	NESP	14.2	2	5	EM	
ADD-01 _ 072616 _ NSS _BL_ 11	12:45	185140356	NESP	17.3	2	1	SJM	Both only partial bird stressed
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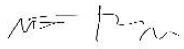
Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	Capillary Tube

NOTE: Bird sampling was conducted according to the following SOPs included in the QAPP;
SOP S-8 Bird Mist Netting
SOP S-9 Songbird Sampling

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Sample Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 5/12/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012217	**Location ID:**	MMBKD-01
Collectors:	LSV, KCB	**Lat/Long:**	44.5985620 -68.8604457
Media:	Blood (BL)	**Weather:**	Overcast, 25-35, 3-5 mph
Species:	American Black Duck (ABD)	**Collection Method:**	Rocket Net

Sample ID	Time	Band Number	Weight (grams)	Sex	Age	Number of Hg Capillary Tubes	Notes
MMBKD-01 _ 012217 _ ABD_ 01 _BL	17:00	N/A	1154	F	2	8	SY (2 in age);8 tubes, not all full, 2 full; sacrificed; 1154g, MS/MSD
MMBKD-01 _ 012217 _ ABD_ 02 _BL	17:15	N/A	1216	M	3	5	ASY (3 in age column); 2 full tubes; sacrificed 1216g
_ _							
_ _							Captured by IFW at Treat Point-Franfurt Maine.
_ _							Coordinants NAD_1983_StatePlane_Maine_East_FIPS_1801_Feet
_ _							X: 890371.080169823
_ _							Y: 339895.791874744
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Requested Analyses:

Analytes: Total Mercury
Methods: 1631e
Container: 70 uL Capillary Tube - Instant Freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

MS/MSD QC Tracking

If yes, MS sample ID:	MMBKD-01 _ 012217 _ ABD_ 01 _BL_MS
If yes, MSD sample ID:	MMBKD-01 _ 012217 _ ABD_ 01 _BL_MD
Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

Additional Comments:

N/A = Not Applicable

Tech Signature: _____

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012417	**Location ID:**	FRB-01
Collectors:	LSV, KCB	**Lat/Long:**	44.4634 -68.357533
Media:	Blood (BL)	**Weather:**	25-35f. 25-35knts. NE. 3-7 ft waves. Overcast. Freezing rain. Sleet. Rain
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Weight (grams)	Sex	Age	Number of Hg Capillary Tubes	Notes
FRB-01 _ 012417 _ ABD_ 01 _BL	14:00	211730622	1600	M	3	5	ASY(3). 1.60kg
FRB-01 _ 012417 _ ABD_ 02 _BL	14:15	210705527	1540	M	3	5	ASY(3). 1.54 kg one broken cap tube
FRB-01 _ 012417 _ ABD_ 03 _BL	14:30	211730627	1370	M	3	5	ASY(3). 1.37kg. One broken cap tube
FRB-01 _ 012417 _ ABD_ 04 _BL	14:45	211731196	1380	M	2	5	SY(2). 1.38kg
FRB-01 _ 012417 _ ABD_ 05 _BL	15:00	211731202	1380	M	3	5	ASY(3) 1.38 kg
FRB-01 _ 012417 _ ABD_ 06 _BL	15:15	N/A	1420	M	2	5	SY(2) 1.42kg. MS/MD, Sacrifice
FRB-01 _ 012417 _ ABD_ 07 _BL	15:30	N/A	1540	M	2	5	SY(2) 1.54kg, Sacrifice
FRB-01 _ 012417 _ ABD_ 08 _BL	15:45	N/A	1340	F	2	5	SY(2). 1.34kg, Sacrifice
FRB-01 _ 012417 _ ABD_ 09 _BL	16:00	N/A	1460	M	3	5	ASY(3). 1.46 kg. Additional tube =6 w 1 broken, Sacrifice
FRB-01 _ 012417 _ ABD_ 10 _BL	16:15	N/A	1320	F	2	5	SY (2) 1.32kg, Sacrifice
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Requested Analyses:

Analytes: Total Mercury
Methods: 1631e
Container: 70 µL Capillary Tube - Instant Freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

MS/MSD QC Tracking

If yes, MS sample ID:	FRB-01 _ 012417 _ ABD_ 06 _BL_MS
If yes, MSD sample ID:	FRB-01 _ 012417 _ ABD_ 06 _BL_MD
Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

Additional Comments:

N/A = Not Applicable

Tech Signature: _____

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012417	**Location ID:**	ES-13
Collectors:	LSV, KCB	**Lat/Long:**	44.505666 -68.771133
Media:	Blood (BL)	**Weather:**	25-35f 25-30knots NE. 5-9 feet seas. Overcast sleet, freezing rain, snow
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Weight (grams)	Sex	Age	Number of Hg Capillary Tubes	Notes
ES-13 _ 012417 _ ABD_ 01 _BL	18:00	N/A	1540	M	3	4	ASY(3). 1.54kg, Sacrifice
ES-13 _ 012417 _ ABD_ 02 _BL	18:15	N/A	1510	M	3	5	ASY(3). 1.51kg, Sacrifice
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Requested Analyses:

Analytes: Total Mercury
Methods: 1631e
Container: 70 µL Capillary Tube - Instant Freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

MS/MSD QC Tracking

If yes, MS sample ID:	ES-13	_ 012817 _	ABD_	04	_BL_MS
If yes, MSD sample ID:	ES-13	_ 012817 _	ABD_	04	_BL_MD

Analytes: Total Mercury
Methods: 1631e
Container: 70 µL Capillary Tube - Instant Freeze

Additional Comments:

N/A = Not Applicable

Tech Signature: _____

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012417	**Location ID:**	MMBKD-01
Collectors:	LSV, KCB	**Lat/Long:**	44.584716 -68.862066
Media:	Blood (BL)	**Weather:**	25-35f , 15-20knts, NE, 3-5 ft waves, overcast snow,sleet,freezing rain.
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Weight (grams)	Sex	Age	Number of Hg Capillary Tubes	Notes
MMBKD-01 _ 012417 _ ABD_ 03 _BL	10:00	N/A	1570	M	2	3	SY(2)
MMBKD-01 _ 012417 _ ABD_ 04 _BL	10:20	N/A	1400	M	2	5	SY(2)
MMBKD-01 _ 012417 _ ABD_ 05 _BL	10:35	N/A	1280	F	2	5	SY(2)
MMBKD-01 _ 012417 _ ABD_ 06 _BL	10:50	210706201	N/C	M	2	5	SY(2) one partial tube
MMBKD-01 _ 012417 _ ABD_ 07 _BL	11:05	210706211	N/C	M	2	4	SY(2)
MMBKD-01 _ 012417 _ ABD_ 08 _BL	11:20	210706212	N/C	M	2	4	SY(2)
MMBKD-01 _ 012417 _ ABD_ 09 _BL	11:40	210706218	1530	M	2	3	SY(2) 1.53kg
MMBKD-01 _ 012417 _ ABD_ 10 _BL	12:00	210706221	1470	M	2	4	SY(2). 1.47kg. One broken
MMBKD-01 _ 012417 _ ABD_ 11 _BL	12:15	210706231	1370	F	2	3	SY(2) 1.37 kg
MMBKD-01 _ 012417 _ ABD_ 12 _BL	12:30	210706234	1200	F	2	5	SY(2).1.20kg
MMBKD-01 _ 012417 _ ABD_ 13 _BL	12:40	210706235	1310	F	2	5	SY(2). 1.31kg
MMBKD-01 _ 012417 _ ABD_ 14 _BL	12:50	210706236	1530	M	3	4	ASY(3). 1.53 kg
MMBKD-01 _ 012417 _ ABD_ 15 _BL	13:00	182785912	1610	M	3	3	ASY(3). 1.61kg
_ _							
_ _							

Requested Analyses:

Analytes: Total Mercury
Methods: 1631e
Container: 70 µL Capillary Tube - Instant Freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

MS/MSD QC Tracking

If yes, MS sample ID:	MMBKD-01 _ 012217 _ ABD_ 01 _BL_MS
If yes, MSD sample ID:	MMBKD-01 _ '012217 _ ABD_ 01 _BL_MD
Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

Additional Comments:

N/C = Not Collected N/A = Not Applicable

Tech Signature: _____

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012817	**Location ID:**	ES-13
Collectors:	LSV, KCB	**Lat/Long:**	44.505666 -68.771133
Media:	Blood (BL)	**Weather:**	25-35 f. 7-12knots. Westerly wind. Choppy sea. Sheltered cove. Scattered clouds
Species:	American Black Duck (ABD)	**Collection Method:**	Rocket Net

Sample ID	Time	Band Number	Weight (grams)	Sex	Age	Number of Hg Capillary Tubes	Notes
ES-13 _ 012817 _ ABD_ 03 _BL	13:20	183756307	1430	M	3	4	1.49 kg weight; ASY(3);
ES-13 _ 012817 _ ABD_ 04 _BL	13:25	N/A	1540	M	3	5	1.54 kg; ASY (3); 6 tubes blood extra for ms/md, sacrifice
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_ _							
_ _							
_ _							
_ _							

Requested Analyses:

Analytes: Total Mercury
Methods: 1631e
Container: 70 µL Capillary Tube - Instant Freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

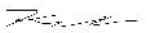
Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

MS/MSD QC Tracking

If yes, MS sample ID:	ES-13 _ 012817 _ ABD_ 04 _BL_MS
If yes, MSD sample ID:	ES-13 _ 012817 _ ABD_ 04 _BL_MD
Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

Additional Comments:

Birds collect by rocket net, N/A = Not Applicable

Tech Signature: 

QA/QC by: BPW
Date: 3/6/2017

amec foster wheeler

SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	020217	**Location ID:**	FRB-01
Collectors:	KCB	**Lat/Long:**	44.4634 N -068.357533 W
Media:	Blood (BL)	**Weather:**	10-15 deg F calm. Calm sea. Overcast to partly cloudy.
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Weight (grams)	Sex	Age	Number of Hg Capillary Tubes	Notes
FRB-01 _ 020217 _ ABD_ 11 _BL	09:20	211730805	1740	M	3	5	Weight 1740g, ASY(3)
FRB-01 _ 020217 _ ABD_ 12 _BL	09:25	211703806	1190	M	3	4	1190g ASY (3)
FRB-01 _ 020217 _ ABD_ 13 _BL	09:33	211703807	1300	M	2	5	1300g SY(2)
FRB-01 _ 020217 _ ABD_ 14 _BL	09:40	211703808	1350	F	2	5	1350g SY(2) F
FRB-01 _ 020217 _ ABD_ 15 _BL	09:51	211703809	1430	M	3	6	ASY(3) 1430g
_ _							
_ _							
_ _							
_ _							
_ _							
_ _							
_ _							
_ _							
_ _							
_ _							

Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

MS/MSD QC Tracking

If yes, MS sample ID:	FRB-01 _ 020217 _ ABD_ 06 _BL_MS
If yes, MSD sample ID:	FRB-01 _ 020217 _ ABD_ 06 _BL_MD
Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

Additional Comments:

All new bands. Ducks released back to Frenchmans Bay by IFW

Tech Signature: 

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK BLOOD

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	020517	**Location ID:**	ES-13
Collectors:	LSV, KCB	**Lat/Long:**	44.505666 -068.771133
Media:	Blood (BL)	**Weather:**	30-35 deg F. 10-20 knots SSW. Cloudy.
Species:	American Black Duck (ABD)	**Collection Method:**	Rocket Net

Sample ID	Time	Band Number	Weight (grams)	Sex	Age	Number of Hg Capillary Tubes	Notes
ES-13 _ 030356 _ ABD_ 05 _BL	15:15	182785012	1540	M	3	5	1540g, ASY
ES-13 _ 020517 _ ABD_ 06 _BL	15:25	204792070	1230	M	3	6	1360 g ASY(3) 6 tubes
ES-13 _ 020517 _ ABD_ 07 _BL	15:30	204731343	1240	F	3	5	ASY(3) 1230 g.
ES-13 _ 020517 _ ABD_ 08 _BL	15:35	207431344	1420	F	2	5	SY (2) 1420g
ES-13 _ 020517 _ ABD_ 09 _BL	15:40	207431345	1240	F	2	6	Sy(2) 1240g. 6 tubes
ES-13 _ 020517 _ ABD_ 10 _BL	15:55	207431346	1170	F	3	5	ASY(3) 1170 g.
ES-13 _ 020517 _ ABD_ 11 _BL	16:05	207431347	1540	M	3	5	1540g ASY(3)
ES-13 _ 020517 _ ABD_ 12 _BL	16:15	207431348	1380	M	3	5	1380g. ASY (3)
ES-13 _ 020517 _ ABD_ 13 _BL	16:25	207431349	1570	M	3	6	1570g ASY(3) 6 tubes
ES-13 _ 020517 _ ABD_ 14 _BL	16:35	207431350	1260	F	2	5	1260 g SY(2)
ES-13 _ 020517 _ ABD_ 15 _BL	16:40	N/A	1180	F	2	5	1180 gSY(2) sacrifice for MU sample 221 g
_ _							
_ _							
_ _							
_ _							

Requested Analyses:

Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

MS/MSD QC Tracking

If yes, MS sample ID:	ES-13 _ 012817 _ ABD_ 4 _BL_MS
If yes, MSD sample ID:	ES-13 _ 012817 _ ABD_ 4 _BL_MD
Analytes:	Total Mercury
Methods:	1631e
Container:	70 µL Capillary Tube - Instant Freeze

Additional Comments:

Birds collect by rocket net, N/A = Not Applicable

Tech Signature: _____

QA/QC by: Lauren Tierney
Date: 5/12/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK MUSCLE

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012217	**Location ID:**	MMBKD-01
Collectors:	LSV, KCB	**Lat/Long:**	44.5985620 -68.8604457
Media:	Muscle (MU)	**Weather:**	Overcast, 25-35, 3-5 mph
Species:	American Black Duck (ABD)	**Collection Method:**	Rocket Net

Sample ID	Time	Band Number	Total Weight (grams)	Breast Weight (grams)	Sex	Age	Notes
MMBKD-01 _ 012217 _ ABD_ 01 _MU	17:00	N/A	1154	216	F	2	SY bird (after Jan. 1); 1154g; 216 g breast weight
MMBKD-01 _ 012217 _ ABD_ 02 _MU	17:15	N/A	1216	191	M	3	ASY,1216 g, 191 g breast weigh
_ _		N/A					
_ _		N/A					Captured by IFW at Treat Point-Franfurt Maine.
_ _		N/A					Coordinants
_ _		N/A					X: 890371.080169823
_ _		N/A					Y: 339895.791874744
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					

Requested Analytes:

Analytes:	Total Mercury, Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock - Instant freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

QC Tracking:

MS/MSD QC Tracking

If yes, MS sample ID:	MMBKD-01	_ 012417	_ ABD_	04	_MU_MS	
If yes, MSD sample ID:	MMBKD-01	_ 012417	_ ABD_	04	_MU_MD	
	_					

Analytes:	Total Mercury
Methods:	1631e
Container:	Ziploc - Instant freeze

Rinsate QC Tracking

						Date	Time
0	EB-Knife_	012317	_ABD_	M00	_MU_QC	012317	0640
1	EB-Knife_	012317	_ABD_	M01	_MU_QC	012317	0720
2	EB-Knife_	012317	_ABD_	M02	_MU_QC	012317	1445
3							
4							
5							

Analytes:	Total Mercury
Methods:	1631e
Container:	250 ml Poly - 4°C
Water Sour	Eurofins Frontier Laboratory

Additional Comments:

Eq-00 0640h. Eq-01 0720h. Eq-02 1445h. 250 ml H2O. 4C, N/A = Not Applicable

Tech Signature: _____

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK MUSCLE

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012417	**Location ID:**	ES-13
Collectors:	LSV, KCB	**Lat/Long:**	44.505666 -68.771133
Media:	Muscle (MU)	**Weather:**	25-35f 25-30knots NE. 5-9 feet seas. Overcast sleet, freezing rain, snow
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Total Weight (grams)	Breast Weight (grams)	Sex	Age	Notes
ES-13 _ 012417 _ ABD_ 01 _MU	18:30	N/A	1540	248	M	3	ASY (3).1.54 kg whole body wt. MS/MD. 248g breast tissue wt
ES-13 _ 012417 _ ABD_ 02 _MU	18:45	N/A	1510	238	M	3	ASY. (3).1.51kg whole body wt. 238g breast tissue wt
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					

Requested Analyses:

Analytes: Total Mercury, Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock - Instant freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

QC Tracking:

MS/MSD QC Tracking

If yes, MS sample ID: ES-13 _ 012417 _ ABD_ 01 _MU_MS
If yes, MSD sample ID: ES-13 _ 012417 _ ABD_ 01 _MU_MD
_

Analytes: Total Mercury
Methods: 1631e
Container: Ziploc - Instant Freeze

Rinsate QC Tracking

		Date	Time
0	EB-Knife_ 012317 _ABD_ 00 _MU_QC	012317	0650
1	EB-Knife_ 012417 _ABD_ 01 _MU_QC	012417	1835
2	EB-Knife_ 012417 _ABD_ 02 _MU_QC	012417	1850
3			
4			
5			

Analytes: Total Mercury
Methods: 1631e
Container: 250 ml Poly - 4°C
Water Sour: Eurofins Frontier Laboratory

Additional Comments:

EB-00. 0650hr. EB-01. 1835hr. EB-02. 1850hr, N/A = Not Applicable

Tech Signature: 

QA/QC by: BPW
Date: 3/6/2017

SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK MUSCLE

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012417	**Location ID:**	MMBKD-01
Collectors:	LSV, KCB	**Lat/Long:**	44.584716 -68.862066
Media:	Muscle (MU)	**Weather:**	25-35f , 15-20knts, NE, 3-5 ft waves, overcast snow,sleet,freezing rain.
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Total Weight (grams)	Breast Weight (grams)	Sex	Age	Notes
MMBKD-01 _ 012417 _ ABD_ 03 _MU	00:00	N/A	1570	264	M	2	SY (2).1.57g whole body. 264 g breast weight
MMBKD-01 _ 012417 _ ABD_ 04 _MU	17:25	N/A	1400	250	M	2	SY(2). 1.40 g whole body. 250g breast tissue weight. MS/MD
MMBKD-01 _ 012417 _ ABD_ 05 _MU	17:15	N/A	1200	202	F	2	SY (2). 202 g breast weight. 1.28 g whole body
_ _		N/A					

Requested Analyses:

Analytes: Total Mercury, Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock - Instant freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

QC Tracking:

MS/MSD QC Tracking

If yes, MS sample ID: MMBKD-01 _ 012417 _ ABD_ 04 _MU_MS
If yes, MSD sample ID: MMBKD-01 _ 012417 _ ABD_ 04 _MU_MD
_

Analytes: Total Mercury
Methods: 1631e
Container: Ziploc - Instant freeze

Rinsate QC Tracking

						Date	Time
0							
1							
2							
3	EB-Knife_	012317	_ABD_	M03	_MU_QC	012417	1730
4	EB-Knife_	012317	_ABD_	M04	_MU_QC	012417	1745
5	EB-Knife_	012317	_ABD_	M05	_MU_QC	012417	1805

Analytes: Total Mercury
Methods: 1631e
Container: 250 ml Poly - 4°C
Water Sou: Eurofins Frontier Laboratory

Additional Comments:

EB-00. 0640hr. EB-01. 0720hr. EB-02. 1445hr. EB-03. 1730hr. EB-04. 1745hr. EB-05. 1805hr. N/A = Not Applicable

Tech Signature: 

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK MUSCLE

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012517	**Location ID:**	FRB-01
Collectors:	LSV, KCB	**Lat/Long:**	44.4634 -68.357533
Media:	Muscle (MU)	**Weather:**	30-35f 10-15knts NNW, 1-2 ft waves, overcast rain
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Total Weight (grams)	Breast Weight (grams)	Sex	Age	Notes
FRB-01 _ 012517 _ ABD_ 06 _MU	14:50	N/A	1420	220	M	2	SY(2). 1.42kg whole bodybwt. 229g breast wt. MS/MD collected
FRB-01 _ 012517 _ ABD_ 07 _MU	15:15	N/A	1540	241	M	2	SY(2), 1.54kg whole body wt. 241g breast wt.
FRB-01 _ 012517 _ ABD_ 08 _MU	16:15	N/A	1340	208	F	2	SY(2). 1.34kg whole body wt. 208g breast wt
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					

Requested Analyses:

Analytes:	Total Mercury, Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock - Instant freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

QC Tracking:

MS/MSD QC Tracking

If yes, MS sample ID:	FRB-01 _ 012517 _ ABD_ 06 _MU_MS
If yes, MSD sample ID:	FRB-01 _ 012517 _ ABD_ 06 _MU_MD

Analytes:	Total Mercury
Methods:	1631e
Container:	Ziploc - Instant Freeze

Rinsate QC Tracking

		Date	Time
0	EB-Knife_ 012317 _ABD_ F00 _MU_QC	012317	0645
1	EB-Knife_ 12517 _ABD_ F01 _MU_QC	12517	1500
2	EB-Knife_ 012517 _ABD_ F02 _MU_QC	012517	1520
3	EB-Knife_ 012517 _ABD_ F03 _MU_QC	012517	1620
4			
5			

Analytes:	Total Mercury
Methods:	1631e
Container:	250 ml Poly - 4°C
Water Sour	Eurofins Frontier Laboratory

Additional Comments:

Ducks collect at the Jordan River
EB-01 1500 hr. EB-02 1520hr. EB-03 1620hr, N/A = Not Applicable

Tech Signature: [redacted]

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK MUSCLE

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012617	**Location ID:**	FRB-01
Collectors:	LSV, KCB	**Lat/Long:**	44.4634 -68.357533
Media:	Muscle (MU)	**Weather:**	30-45 F. Calm. Calm seas. Mostly sun
Species:	American Black Duck (ABD)	**Collection Method:**	Trap

Sample ID	Time	Band Number	Total Weight (grams)	Breast Weight (grams)	Sex	Age	Notes
FRB-01 _ 012617 _ ABD_ 09 _MU	15:15	N/A	1460	235	M	3	ASY(3). 1.46 kg whole body wt. 235g breast wt
FRB-01 _ 012617 _ ABD_ 10 _MU	15:35	N/A	1320	223	F	2	SY(2). 1.32kg whole bodywt. 223g breast tissue. Note white parasite in muscle
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					

Requested Analyses:

Analytes:	Total Mercury, Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock - Instant freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

QC Tracking:

MS/MSD QC Tracking

If yes, MS sample ID:	FRB-01 _ 012517 _ ABD_ 06 _MU_MS
If yes, MSD sample ID:	FRB-01 _ 012517 _ ABD_ 06 _MU_MD
	_
Analytes:	Total Mercury
Methods:	1631e
Container:	Ziploc - Instant Freeze

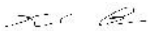
Rinsate QC Tracking

		Date	Time
0			
1			
2			
3			
4	EB-Knife_ 012617 _ABD_ 04 _MU_QC	012617	1520
5	EB-Knife_ 012617 _ABD_ 05 _MU_QC	012617	1540

Analytes:	Total Mercury
Methods:	1631e
Container:	250 ml Poly - 4°C
Water Sour	Eurofins Frontier Laboratory

Additional Comments:

EB-04. 1520hr. EB-05. 1540hr, N/A = Not Applicable

Tech Signature: 

QA/QC by: BPW
Date: 3/6/2017

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SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK MUSCLE

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	012817	**Location ID:**	ES-13
Collectors:	LSV, KCB	**Lat/Long:**	44.505666 -68.771133
Media:	Muscle (MU)	**Weather:**	25-35 f. 7-12knots. Westerly wind. Choppy sea. Sheltered cove. Scattered clouds
Species:	American Black Duck (ABD)	**Collection Method:**	Rocket Net

Sample ID	Time	Band Number	Total Weight (grams)	Breast Weight (grams)	Sex	Age	Notes
ES-13 _ 012817 _ ABD_ 03 _MU	15:25	183756307	1490	273	M	3	ASY(3). 1.49kg total body wt. previously banded recapture. 273g breast wt
ES-13 _ 012817 _ ABD_ 04 _MU	15:35	N/A	1540	267	M	3	ASY(3). 1.54kg. Total body wt. 267g breast wt.
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					

Requested Analyses:

Analytes: Total Mercury, Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock - Instant freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

QC Tracking:

MS/MSD QC Tracking

If yes, MS sample ID: ES-13 _ 012417 _ ABD_ 01 _MU_MS
If yes, MSD sample ID: ES-13 _ 012417 _ ABD_ 01 _MU_MD

Analytes: Total Mercury
Methods: 1631e
Container: Ziploc - Instant Freeze

Rinsate QC Tracking

		Date	Time
0			
1			
2			
3	EB-Knife_ 012817 _ABD_ E03 _MU_QC	012817	1530
4	EB-Knife_ 012817 _ABD_ E04 _MU_QC	012817	1540
5			

Analytes: Total Mercury
Methods: 1631e
Container: 250 ml Poly - 4°C
l Water Sourc: Eurofins Frontier Laboratory

Additional Comments:

EB-03. 1530hr. EB-04. 1540hr.
Bait for ducks was corn. Sample collected CORN_012817_DUCK_BAIT (sample time 1600 012817) for Hg 1631e ziplock bag 4deg c
Birds collected with rocket net, N/A = Not Applicable

Tech Signature: 

QA/QC by: BPW
Date: 3/6/2017

SAMPLE COLLECTION LOG
AMERICAN BLACK DUCK MUSCLE

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	020517	**Location ID:**	ES-13
Collectors:	LSV, KCB	**Lat/Long:**	44.505666 -068.771133
Media:	Muscle (MU)	**Weather:**	30-35 deg F. 10-20 knots SSW. Cloudy.
Species:	American Black Duck (ABD)	**Collection Method:**	Rocket Net

Sample ID	Time	Band Number	Total Weight (grams)	Breast Weight (grams)	Sex	Age	Notes
ES-13 _ 020517 _ ABD_ 15 _MU	17:25	N/A	1180	221	F	2	1180 g total. SY(2) 221 g breast tissue
		N/A					
		N/A					
		N/A					
		N/A					
		N/A					
		N/A					
		N/A					
		N/A					
		N/A					
		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					
_ _		N/A					

Requested Analytes:

Analytes:	Total Mercury, Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock - Instant freeze

NOTE: Duck sampling was conducted according to the following SOPs included in the QAPP;
SOP S-21 American Black Duck Sampling

Traps were baited by The Maine Department of Fisheries & Wildlife with corn or similar grain.

QC Tracking:

MS/MSD QC Tracking

If yes, MS sample ID: ES-13 _ 012417 _ ABD_ 01 _MU_MS
If yes, MSD sample ID: ES-13 _ 012417 _ ABD_ 01 _MU_MD
_

Analytes:	Total Mercury
Methods:	1631e
Container:	Ziploc - Instant Freeze

Rinsate QC Tracking

	Date	Time
0		
1		
2		
3		
4		
5 EB-Knife_ 20517 _ABD_ 15 _MU_QC	020517	1735

Analytes:	Total Mercury
Methods:	1631e
Container:	250 ml Poly - 4°C
Water Sou	Eurofins Frontier Laboratory

Additional Comments:

EB-05 at 1735. Birds collect by rocket net, N/A = Not Applicable

Tech Signature: _____

QA/QC by: Lauren Tierney
Date: 5/12/2017

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SAMPLE COLLECTION LOG
POLYCHAETES WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072616	**Location ID:**	BO-04
Collectors:	DRY, DOL	**Lat/Long:**	44.753412 -68.811941
Media:	Whole Body (WB)	**Weather:**	85 degrees, sunny
Species:	Polychaetes (POL)	**Collection Method:**	Shovel

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
BO-04 _ 072616 _POL_WB_ 01	10:15		4.0		
BO-04 _ 072616 _POL_WB_ 02	10:15		4.0		
BO-04 _ 072616 _POL_WB_ 03	10:15		4.0		
BO-04 _ 072616 _POL_WB_ 04	10:15		4.0		
BO-04 _ 072616 _POL_WB_ 05	10:15		5.0		
_					
_					
_					
_					
_					
_					
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids
Methods:	1631e, 1630, NOAA 1993a
Container:	2 oz polyethylene jar

Note: Polychaete sampling was conducted according to the following SOP included in the QAPP;
SOP S-15 Polychaete Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	BO-04 _ 072616 _POL_WB_MS
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	BO-04 _ 072616 _POL_WB_MD
Were samples frozen?	Yes		

Sediment/Soil Sample

Sample ID	Time	Odor, Color, Type	Notes
BO-04 _ 072616 _SED_03	10:15	No odor, Brown, Silt, ML, 100% moisture	

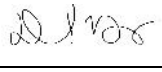
Requested Analyses:

Analytes:	Total Hg, Total MeHg, TOC, Grain Size
Methods:	1631e, 1630, Lloyd-Khan, ASTM D422
Container:	4 oz. AG, 8 oz. AG

Note: Sediment sampling was conducted according to the following SOP included in the QAPP;
SOP S-6, SOP S-7, Sediment Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, Duplicate ID:	BO-04 _ 072616 _SED_03_DUP
QC Samples Types:	Duplicate,MS,MSD	If yes, MS sample ID:	BO-04 _ 072616 _SED_03_MS
		If yes, MSD sample ID:	BO-04 _ 072616 _SED_03_MD

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
POLYCHAETES WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072616	**Location ID:**	OB-05
Collectors:	DRY, DOL	**Lat/Long:**	44.7055 -68.8379
Media:	Whole Body (WB)	**Weather:**	85 degrees, sunny
Species:	Polychaetes (POL)	**Collection Method:**	Shovel

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
OB-05 _ 072616 _POL_WB_ 01	12:00		4.0		
OB-05 _ 072616 _POL_WB_ 02	12:00		4.0		
OB-05 _ 072616 _POL_WB_ 03	12:00		4.0		
OB-05 _ 072616 _POL_WB_ 04	12:00		4.0		
OB-05 _ 072616 _POL_WB_ 05	12:00		4.0		
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids	Note: Polychaete sampling was conducted according to the following SOP included in the QAPP; SOP S-15 Polychaete Sampling
Methods:	1631e, 1630, NOAA 1993a	
Container:	2 oz polyethylene jar	

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sediment/Soil Sample

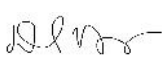
Sample ID	Time	Odor, Color, Type	Notes
OB-05 _ 072616 _SED_03	12:00	No odor, Brown, Silt, ML, 100% moisture	

Requested Analyses:

Analytes:	Total Hg, Total MeHg, TOC, Grain Size	Note: Sediment sampling was conducted according to the following SOP included in the QAPP; SOP S-6, SOP S-7, Sediment Sampling
Methods:	1631e, 1630, Lloyd-Khan, ASTM D422	
Container:	4 oz. AG, 8 oz. AG	

Additional Questions:

Additional QC Collected:	No	If yes, Duplicate ID:	NA
QC Samples Types:	NA	If yes, MS sample ID:	NA
		If yes, MSD sample ID:	NA

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
POLYCHAETES WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072716	**Location ID:**	ES-13
Collectors:	DRY, DOL	**Lat/Long:**	44.5049 -68.7717
Media:	Whole Body (WB)	**Weather:**	80 degrees, sunny
Species:	Polychaetes (POL)	**Collection Method:**	Shovel

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
ES-13 _ 072716 _POL_WB_ 01	11:30		3.42		
ES-13 _ 072716 _POL_WB_ 02	11:30		3.37		
ES-13 _ 072716 _POL_WB_ 03	11:30		3.35		
ES-13 _ 072716 _POL_WB_ 04	11:30		4.27		
ES-13 _ 072716 _POL_WB_ 05	11:30		4.17		
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids	Note: Polychaete sampling was conducted according to the following SOP included in the QAPP; SOP S-15 Polychaete Sampling
Methods:	1631e, 1630, NOAA 1993a	
Container:	2 oz polyethylene jar	

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-13 _ 072716 _POL_WB_MS
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-13 _ 072716 _POL_WB_MD
Were samples frozen?	Yes		

Sediment/Soil Sample

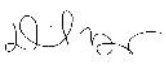
Sample ID	Time	Odor, Color, Type	Notes
ES-13 _ 072716 _SED_03	11:30	No odor, Dark gray, Silt with trace sand and many woodchips, ML, few live mussels	

Requested Analyses:

Analytes:	Total Hg, Total MeHg, TOC, Grain Size	Note: Sediment sampling was conducted according to the following SOP included in the QAPP; SOP S-6, SOP S-7, Sediment Sampling
Methods:	1631e, 1630, Lloyd-Khan, ASTM D422	
Container:	4 oz. AG, 8 oz. AG	

Additional Questions:

Additional QC Collected:	No	If yes, Duplicate ID:	NA
QC Samples Types:	NA	If yes, MS sample ID:	NA
		If yes, MSD sample ID:	NA

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
POLYCHAETES WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MM, JB, DL	**Lat/Long:**	44.472375 -68.355096
Media:	Whole Body (WB)	**Weather:**	Calm, sunny
Species:	Polychaetes (POL)	**Collection Method:**	Shovel

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
FRB-01 _ 092816 _POL_WB_ 01	13:40	7	5.0		
FRB-01 _ 092816 _POL_WB_ 02	13:40	3	3.2		
FRB-01 _ 092816 _POL_WB_ 03	13:40	5	3.5		
FRB-01 _ 092816 _POL_WB_ 04	13:40	7	2.7		
FRB-01 _ 092816 _POL_WB_ 05	13:40	3	3.1		
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids	Note: Polychaete sampling was conducted according to the following SOP included in the QAPP; SOP S-15 Polychaete Sampling
Methods:	1631e, 1630, NOAA 1993a	
Container:	2 oz polyethylene jar	

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sediment/Soil Sample

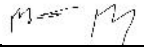
Sample ID	Time	Odor, Color, Type	Notes
FRB-01 _ 092816 _SED_03	12:35	Sulfur, Black, Coarse sand, some leaves and grass	Sample homogenized

Requested Analyses:

Analytes:	Total Hg, Total MeHg, TOC, Grain Size	Note: Sediment sampling was conducted according to the following SOP included in the QAPP; SOP S-6, SOP S-7, Sediment Sampling
Methods:	1631e, 1630, Lloyd-Khan, ASTM D422	
Container:	4 oz. AG, 8 oz. AG	

Additional Questions:

Additional QC Collected:	No	If yes, Duplicate ID:	NA
QC Samples Types:	NA	If yes, MS sample ID:	NA
		If yes, MSD sample ID:	

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
POLYCHAETES WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072816	**Location ID:**	ES-FP
Collectors:	DRY, DOL	**Lat/Long:**	44.4719 -68.8169
Media:	Whole Body (WB)	**Weather:**	85 degrees, sunny
Species:	Polychaetes (POL)	**Collection Method:**	Shovel

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
ES-FP _ 072816 _POL_WB_ 01	14:30		5.56		
ES-FP _ 072816 _POL_WB_ 02	14:30		3.78		
ES-FP _ 072816 _POL_WB_ 03	14:30		3.84		
ES-FP _ 072816 _POL_WB_ 04	14:30		4.96		
ES-FP _ 072816 _POL_WB_ 05	14:30		5.01		
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids	Note: Polychaete sampling was conducted according to the following SOP included in the QAPP; SOP S-15 Polychaete Sampling
Methods:	1631e, 1630, NOAA 1993a	
Container:	2 oz polyethylene jar	

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sediment/Soil Sample

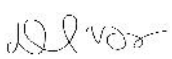
Sample ID	Time	Odor, Color, Type	Notes
ES-FP _ 072816 _SED_03	14:30	No odor, Dark gray, Silty sand with some gravel and trace fines, SM, no plasticity, 100% moisture	Live clams at this location

Requested Analyses:

Analytes:	Total Hg, Total MeHg, TOC, Grain Size	Sediment sampling was conducted according to the following SOP included in the QAPP; SOP S-6, SOP S-7, Sediment Sampling
Methods:	1631e, 1630, Lloyd-Khan, ASTM D422	
Container:	4 oz. AG, 8 oz. AG	

Additional Questions:

Additional QC Collected:	Yes	If yes, Duplicate ID:	ES-FP	_ 072816	_SED_03_DUP
QC Samples Types:	Duplicate,MS,MSD	If yes, MS sample ID:	ES-FP	_ 072816	_SED_03_MS
		If yes, MSD sample ID:	ES-FP	_ 072816	_SED_03_MD

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

SAMPLE COLLECTION LOG
POLYCHAETES WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	072916	**Location ID:**	MMPOLY-01
Collectors:	DRY, DOL	**Lat/Long:**	44.6044 -68.8555
Media:	Whole Body (WB)	**Weather:**	85 degrees, sunny
Species:	Polychaetes (POL)	**Collection Method:**	Shovel

Sample ID	Time	Number of Individuals per Composite	Weight of Composite (grams)	Photo Number	Notes
MMPOLY-01 _ 072916 _POL_WB_ 01	14:30		5.14		
MMPOLY-01 _ 072916 _POL_WB_ 02	14:30		5.07		
MMPOLY-01 _ 072916 _POL_WB_ 03	14:30		5.23		
MMPOLY-01 _ 072916 _POL_WB_ 04	14:30		4.46		
MMPOLY-01 _ 072916 _POL_WB_ 05	14:30		5.09		
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Requested Analyses:

Analytes:	Total Hg, Total MeHg, Total Lipids	Note: Polychaete sampling was conducted according to the following SOP included in the QAPP; SOP S-15 Polychaete Sampling
Methods:	1631e, 1630, NOAA 1993a	
Container:	2 oz polyethylene jar	

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Were samples frozen?	Yes		

Sediment/Soil Sample

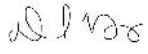
Sample ID	Time	Odor, Color, Type	Notes
MMPOLY-01 _ 072916 _SED_03	14:30	No odor, Black, Silt with trace fine sand, ML, no plasticity, 100% moisture	

Requested Analyses:

Analytes:	Total Hg, Total MeHg, TOC, Grain Size	Note: Sediment sampling was conducted according to the following SOP included in the QAPP; SOP S-6, SOP S-7, Sediment Sampling
Methods:	1631e, 1630, Lloyd-Khan, ASTM D422	
Container:	4 oz. AG, 8 oz. AG	

Additional Questions:

Additional QC Collected:	No	If yes, Duplicate ID:	NA
QC Samples Types:	NA	If yes, MS sample ID:	NA
		If yes, MSD sample ID:	NA

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092616	**Location ID:**	ES-FP
Collectors:	MMDL	**Lat/Long:**	44.4719 -68.8169
Media:	Whole Body (WB)	**Weather:**	Super calm
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-FP _ 092616 _BLM_WB_ 01	15:00	65.0	39.0		
ES-FP _ 092616 _BLM_WB_ 02	15:00	61.0	36.0		
ES-FP _ 092616 _BLM_WB_ 03	15:00	66.0	41.0		
ES-FP _ 092616 _BLM_WB_ 04	15:00	68.0	49.0		
ES-FP _ 092616 _BLM_WB_ 05	15:00	61.0	35.0		
ES-FP _ 092616 _BLM_WB_ 06	15:00	69.0	52.0		
ES-FP _ 092616 _BLM_WB_ 07	15:00	64.0	39.0		
ES-FP _ 092616 _BLM_WB_ 08	15:00	70.0	43.0		
ES-FP _ 092616 _BLM_WB_ 09	15:00	62.0	37.0		
ES-FP _ 092616 _BLM_WB_ 10	15:00	61.0	37.0		
ES-FP _ 092616 _BLM_WB_ 11	15:00	65.0	40.0		
ES-FP _ 092616 _BLM_WB_ 12	15:00	60.0	33.0		
ES-FP _ 092616 _BLM_WB_ 13	15:00	75.0	60.0		
ES-FP _ 092616 _BLM_WB_ 14	15:00	65.0	48.0		
ES-FP _ 092616 _BLM_WB_ 15	15:00	65.0	44.0		
ES-FP _ 092616 _BLM_WB_ 16	15:00	70.0	40.0		
ES-FP _ 092616 _BLM_WB_ 17	15:00	62.0	40.0		
ES-FP _ 092616 _BLM_WB_ 18	15:00	65.0	62.0		
ES-FP _ 092616 _BLM_WB_ 19	15:00	60.0	29.0		
ES-FP _ 092616 _BLM_WB_ 20	15:00	62.0	32.0		

Requested Analyses:

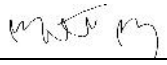
Analytes:	Total Hg, Total Lipids	Note: Messel Sampling was conducted according to the following SOPs included in the QAPP; SOP S-14 Shellfish Sampling
Methods:	1631e, NOAA 1993a	
Container:	Ziplock	

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-FP _ 092616 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-FP _ 092616 _BLM_WB_MD 01

General observations of habitat, abundance and diversity: Not very, abundant seaweed

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092616	**Location ID:**	ES-FP
Collectors:	MMDL	**Lat/Long:**	44.4719 -68.8169
Media:	Whole Body (WB)	**Weather:**	Calm
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-FP _ 092616 _BLM_WB_ MD	15:00	63.0	33.0		
ES-FP _ 092616 _BLM_WB_ MS	15:00	60.0	35.0		
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

Note: Messel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

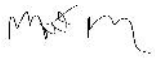
Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-FP _ 092616 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-FP _ 092616 _BLM_WB_MD 01

General observations of habitat, abundance and diversity:

Low

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-03
Collectors:	MMDL	**Lat/Long:**	44.4833 -68.8337
Media:	Whole Body (WB)	**Weather:**	Calm, cloudy
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-03 _ 092716 _BLM_WB_ 01	13:00	62.0	43.7		
ES-03 _ 092716 _BLM_WB_ 02	13:00	56.0	28.9		
ES-03 _ 092716 _BLM_WB_ 03	13:00	51.0	23.7		
ES-03 _ 092716 _BLM_WB_ 04	13:00	50.0	21.2		
ES-03 _ 092716 _BLM_WB_ 05	13:00	51.0	25.6		
ES-03 _ 092716 _BLM_WB_ 06	13:00	62.0	43.4		
ES-03 _ 092716 _BLM_WB_ 07	13:00	62.0	34.8		
ES-03 _ 092716 _BLM_WB_ 08	13:00	63.0	46.5		
ES-03 _ 092716 _BLM_WB_ 09	13:00	58.0	32.5		
ES-03 _ 092716 _BLM_WB_ 10	13:00	57.0	39.1		
ES-03 _ 092716 _BLM_WB_ 11	13:00	67.0	44.3		
ES-03 _ 092716 _BLM_WB_ 12	13:00	61.0	34.0		
ES-03 _ 092716 _BLM_WB_ 13	13:00	55.0	26.8		
ES-03 _ 092716 _BLM_WB_ 14	13:00	54.0	26.6		
ES-03 _ 092716 _BLM_WB_ 15	13:00	62.0	43.5		
ES-03 _ 092716 _BLM_WB_ 16	13:00	65.0	46.9		
ES-03 _ 092716 _BLM_WB_ 17	13:00	64.0	39.6		
ES-03 _ 092716 _BLM_WB_ 18	13:00	62.0	37.5		
ES-03 _ 092716 _BLM_WB_ 19	13:00	62.0	38.0		
ES-03 _ 092716 _BLM_WB_ 20	13:00	52.0	24.2		

Requested Analyses:

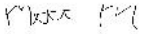
Analytes:	Total Hg, Total Lipids	Note: Messel Sampling was conducted according to the following SOPs included in the QAPP; SOP S-14 Shellfish Sampling
Methods:	1631e, NOAA 1993a	
Container:	Ziplock	

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-03 _ 092716 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-03 _ 092716 _BLM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-03
Collectors:	MMDL	**Lat/Long:**	44.4833 -68.8337
Media:	Whole Body (WB)	**Weather:**	Calm, cloudy
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-03 _ 092716 _BLM_WB_ MD	15:00	54.0	31.9		
ES-03 _ 092716 _BLM_WB_ MS	15:00	57.0	29.7		
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

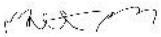
Note: Messel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-03 _ 092716 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-03 _ 092716 _BLM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-15
Collectors:	MM DL	**Lat/Long:**	44.5049 -68.7717
Media:	Whole Body (WB)	**Weather:**	Calm, cloudy
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-15 _ 092716 _BLM_WB_ 01	15:00	60.0	39.8		
ES-15 _ 092716 _BLM_WB_ 02	15:00	59.0	33.9		
ES-15 _ 092716 _BLM_WB_ 03	15:00	61.0	41.5		
ES-15 _ 092716 _BLM_WB_ 04	15:00	63.0	43.3		
ES-15 _ 092716 _BLM_WB_ 05	15:00	56.0	38.0		
ES-15 _ 092716 _BLM_WB_ 06	15:00	54.0	26.2		
ES-15 _ 092716 _BLM_WB_ 07	15:00	58.0	31.7		
ES-15 _ 092716 _BLM_WB_ 08	15:00	54.0	28.0		
ES-15 _ 092716 _BLM_WB_ 09	15:00	50.0	25.9		
ES-15 _ 092716 _BLM_WB_ 10	15:00	52.0	25.4		
ES-15 _ 092716 _BLM_WB_ 11	15:00	57.0	36.6		
ES-15 _ 092716 _BLM_WB_ 12	15:00	49.0	19.7		
ES-15 _ 092716 _BLM_WB_ 13	15:00	51.0	23.2		
ES-15 _ 092716 _BLM_WB_ 14	15:00	50.0	19.3		
ES-15 _ 092716 _BLM_WB_ 15	15:00	49.5	22.2		
ES-15 _ 092716 _BLM_WB_ 16	15:00	46.0	18.6		
ES-15 _ 092716 _BLM_WB_ 17	15:00	47.0	20.9		
ES-15 _ 092716 _BLM_WB_ 18	15:00	50.0	18.2		
ES-15 _ 092716 _BLM_WB_ 19	15:00	46.0	14.3		
ES-15 _ 092716 _BLM_WB_ 20	15:00	37.0	10.6		

Requested Analyses:

Analytes:	Total Hg, Total Lipids	Note: Messel Sampling was conducted according to the following SOPs included in the QAPP; SOP S-14 Shellfish Sampling
Methods:	1631e, NOAA 1993a	
Container:	Ziplock	

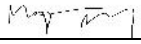
Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-15 _ 092716 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-15 _ 092716 _BLM_WB_MD 01

General observations of habitat, abundance and diversity:

Low, lots of woodchip on intertidal zone

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney

Date: 1/3/2016

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-15
Collectors:	MMDL	**Lat/Long:**	44.5251 -68.7982
Media:	Whole Body (WB)	**Weather:**	Calm, cloudy
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-15 _ 092716 _BLM_WB_ MD	15:00	39.0	12.6		
ES-15 _ 092716 _BLM_WB_ MS	15:00	38.0	10.3		
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

Note: Messel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

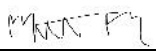
Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-15 _ 092716 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-15 _ 092716 _BLM_WB_MD 01

General observations of habitat, abundance and diversity:

Low, lots of woodchip on intertidal zone

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	100116	**Location ID:**	ES-13
Collectors:	MKMICD	**Lat/Long:**	44.503858 -68.774240
Media:	Whole Body (WB)	**Weather:**	Calm, sunny
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-13 _ 100116 _BLM_WB_ MD	16:00	47.0	20.61		
ES-13 _ 100116 _BLM_WB_ MS	16:00	54.0	19.2		
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

Note: Messel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-13 _ 100116 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-13 _ 100116 _BLM_WB_MD 01

General observations of habitat, abundance and diversity:

Low, lots of seaweed hard to find

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
MUSSEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	100116	**Location ID:**	ES-13
Collectors:	MKM ICD	**Lat/Long:**	44.503858 -68.774240
Media:	Whole Body (WB)	**Weather:**	Not recorded
Species:	Blue Mussel (BLM)	**Collection Method:**	Hand Collection - Intertidal Rocks

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-13 _ 100116 _BLM_WB_ 01	16:00	60.0	43.9		
ES-13 _ 100116 _BLM_WB_ 02	16:00	59.0	25.25		
ES-13 _ 100116 _BLM_WB_ 03	16:00	59.0	40.28		
ES-13 _ 100116 _BLM_WB_ 04	16:00	57.0	23.37		
ES-13 _ 100116 _BLM_WB_ 05	16:00	49.0	26.25		
ES-13 _ 100116 _BLM_WB_ 06	16:00	70.0	49.44		
ES-13 _ 100116 _BLM_WB_ 07	16:00	52.0	21.38		
ES-13 _ 100116 _BLM_WB_ 08	16:00	60.0	34.7		
ES-13 _ 100116 _BLM_WB_ 09	16:00	53.0	25.44		
ES-13 _ 100116 _BLM_WB_ 10	16:00	56.0	30.62		
ES-13 _ 100116 _BLM_WB_ 11	16:00	57.0	30.72		
ES-13 _ 100116 _BLM_WB_ 12	16:00	56.0	24.87		
ES-13 _ 100116 _BLM_WB_ 13	16:00	55.0	25.1		
ES-13 _ 100116 _BLM_WB_ 14	16:00	59.0	34.12		
ES-13 _ 100116 _BLM_WB_ 15	16:00	51.0	23.34		
ES-13 _ 100116 _BLM_WB_ 16	16:00	50.0	22.0		
ES-13 _ 100116 _BLM_WB_ 17	16:00	52.0	20.0		
ES-13 _ 100116 _BLM_WB_ 18	16:00	52.0	23.77		
ES-13 _ 100116 _BLM_WB_ 19	16:00	49.0	20.63		
ES-13 _ 100116 _BLM_WB_ 20	16:00	61.0	43.77		

Requested Analyses:

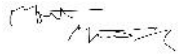
Analytes:	Total Hg, Total Lipids	Note: Messel Sampling was conducted according to the following SOPs included in the QAPP; SOP S-14 Shellfish Sampling
Methods:	1631e, NOAA 1993a	
Container:	Ziplock	

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	ES-13 _ 100116 _BLM_WB_MS 01
QC Samples Types:	MS,MSD	If yes, MSD sample ID:	ES-13 _ 100116 _BLM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
LOBSTER TAILS

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092416	**Location ID:**	CPJL (Cape Jellison)
Collectors:	JAB/ICD	**Lat/Long:**	44.445403 -68.838995
Media:	Tails (TA)	**Weather:**	Partly cloudy/rainy, cool
Species:	Lobster (LOB)	**Collection Method:**	Lobster trap

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Legal/ Sublegal	Photo Number	Notes: (deformities, lesions, etc.)
CPJL _ 092416 _LOB_TA_01	1016	92	600	M	Legal		MS/MSD
CPJL _ 092416 _LOB_TA_02	1016	84	510	M	Legal		
CPJL _ 092416 _LOB_TA_03	1016	92	570	M	Legal		
CPJL _ 092416 _LOB_TA_04	1016	85	470	F	Legal		
CPJL _ 092416 _LOB_TA_05	1016	88	560	M	Legal		
CPJL _ 092416 _LOB_TA_06	1016	93	700	M	Legal		
CPJL _ 092416 _LOB_TA_07	1016	84	510	M	Legal		
CPJL _ 092416 _LOB_TA_08	1016	89	560	M	Legal		
CPJL _ 092416 _LOB_TA_09	1016	93	630	M	Legal		
CPJL _ 092416 _LOB_TA_10	1035	83	510	F	Legal		
CPJL _ 092416 _LOB_TA_11	1035	87	500	M	Legal		
CPJL _ 092416 _LOB_TA_12	1035	87	550	M	Legal		
CPJL _ 092416 _LOB_TA_13	1035	93	650	F	Legal		
CPJL _ 092416 _LOB_TA_14	1042	111	1160	M	Legal		
CPJL _ 092416 _LOB_TA_15	1042	98	760	F	Legal		
CPJL _ 092416 _LOB_TA_16	1042	104	960	M	Legal		
CPJL _ 092416 _LOB_TA_17	1042	86	540	M	Legal		
CPJL _ 092416 _LOB_TA_18	1042	83	520	M	Legal		
CPJL _ 092416 _LOB_TA_19	1042	96	640	M	Legal		
CPJL _ 092416 _LOB_TA_20	1042	95	720	M	Legal		

Requested Analyses:

Analytes:	Total Hg,	Total Lipids
Methods:	1631e	NOAA 1993a
Container:	Ziplock	

Note: Lobster Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

Additional Questions:

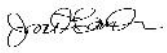
MS/MSD Collected: **yes**

If yes, MS sample ID: CPJL _ 092416 _LOB_TA_MS_01

If yes, MSD sample ID: CPJL _ 092416 _LOB_TA_MD_01

General observations of habitat, abundance and diversity:

Were samples frozen? **yes**

Sampler Signature: 

Reviewed by: Lauren Tierney

Date: 1/3/2017

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SAMPLE COLLECTION LOG
LOBSTER TAILS

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092416	**Location ID:**	HBI-01 (Harborside)
Collectors:	JAB/ICD	**Lat/Long:**	44.354867 -68.822312
Media:	Tails (TA)	**Weather:**	Partly cloudy/rainy, cool
Species:	Lobster (LOB)	**Collection Method:**	Lobster trap

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Legal/ Sublegal	Photo Number	Notes: (deformities, lesions, etc.)
HBI-01 _ 092416 _LOB_TA_01	0755	97	830	F	Legal		MS/MSD
HBI-01 _ 092416 _LOB_TA_02	0755	91	630	M	Legal		
HBI-01 _ 092416 _LOB_TA_03	0755	84	510	M	Legal		
HBI-01 _ 092416 _LOB_TA_04	0810	85	460	F	Legal		
HBI-01 _ 092416 _LOB_TA_05	0810	87	440	F	Legal		
HBI-01 _ 092416 _LOB_TA_06	0812	96	670	M	Legal		
HBI-01 _ 092416 _LOB_TA_07	0815	95	610	M	Legal		
HBI-01 _ 092416 _LOB_TA_08	0821	83	430	F	Legal		
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Requested Analyses:

Analytes:	Total Hg,	Total Lipids
Methods:	1631e	NOAA 1993a
Container:	Ziplock	

Note: Lobster Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

Additional Questions:

MS/MSD Collected: **yes**

If yes, MS sample ID: HBI-01 _ 092416 _LOB_TA_MS_01

If yes, MSD sample ID: HBI-01 _ 092416 _LOB_TA_MD_01

General observations of habitat, abundance and diversity:

Were samples frozen? **yes**

Sampler Signature:

Reviewed by: Lauren Tierney

Date: 1/3/2017

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SAMPLE COLLECTION LOG
LOBSTER TAILS

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092416	**Location ID:**	L10-52 (Odom Ledge)
Collectors:	JAB/ICD	**Lat/Long:**	44.505955 -68.800532
Media:	Tails (TA)	**Weather:**	Partly cloudy/rainy, cool
Species:	Lobster (LOB)	**Collection Method:**	Lobster trap

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Legal/ Sublegal	Photo Number	Notes: (deformities, lesions, etc.)
L10-52 _ 092416 _LOB_TA_01	1114	87	570	M	Legal		MS/MSD
L10-52 _ 092416 _LOB_TA_02	1114	89	540	M	Legal		
L10-52 _ 092416 _LOB_TA_03	1114	85	480	M	Legal		
L10-52 _ 092416 _LOB_TA_04	1114	101	860	M	Legal		
L10-52 _ 092416 _LOB_TA_05	1114	86	540	M	Legal		
L10-52 _ 092416 _LOB_TA_06	1125	84	450	M	Legal		
L10-52 _ 092416 _LOB_TA_07	1125	84	460	F	Legal		
L10-52 _ 092416 _LOB_TA_08	1125	114	1250	M	Legal		
L10-52 _ 092416 _LOB_TA_09	1125	88	530	F	Legal		
L10-52 _ 092416 _LOB_TA_10	1125	91	660	M	Legal		
L10-52 _ 092416 _LOB_TA_11	1125	93	570	M	Legal		
L10-52 _ 092416 _LOB_TA_12	1125	110	1150	M	Legal		
L10-52 _ 092416 _LOB_TA_13	1138	94	600	M	Legal		
L10-52 _ 092416 _LOB_TA_14	1138	109	1180	M	Legal		
L10-52 _ 092416 _LOB_TA_15	1138	89	640	M	Legal		
L10-52 _ 092416 _LOB_TA_16	1138	94	600	M	Legal		
L10-52 _ 092416 _LOB_TA_17	1138	93	710	M	Legal		
L10-52 _ 092416 _LOB_TA_18	1138	101	750	M	Legal		
L10-52 _ 092416 _LOB_TA_19	1138	89	630	M	Legal		
L10-52 _ 092416 _LOB_TA_20	1138	103	1030	M	Legal		

Requested Analyses:

Analytes:	Total Hg,	Total Lipids
Methods:	1631e	NOAA 1993a
Container:	Ziplock	

Note: Lobster Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

Additional Questions:

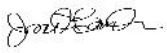
MS/MSD Collected: **yes**

If yes, MS sample ID: L10-52 _ 092416 _LOB_TA_MS_01

If yes, MSD sample ID: L10-52 _ 092416 _LOB_TA_MD_01

General observations of habitat, abundance and diversity:

Were samples frozen? **yes**

Sampler Signature: 

Reviewed by: Lauren Tierney

Date: 1/3/2017

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SAMPLE COLLECTION LOG
LOBSTER TAILS

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092416	**Location ID:**	SVE-01
Collectors:	JAB/ICD	**Lat/Long:**	44.500352 -68.775454
Media:	Tails (TA)	**Weather:**	Partly cloudy/rainy, cool
Species:	Lobster (LOB)	**Collection Method:**	Lobster trap

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Legal/ Sublegal	Photo Number	Notes: (deformities, lesions, etc.)
SVE-01 _ 092416 _LOB_TA_01	12:17	102	970	M	Legal		
SVE-01 _ 092416 _LOB_TA_02	12:17	90	670	M	Legal		
SVE-01 _ 092416 _LOB_TA_03	12:17	104	1060	M	Legal		
SVE-01 _ 092416 _LOB_TA_04	12:17	83	500	M	Legal		
SVE-01 _ 092416 _LOB_TA_05	12:17	112	1100	M	Legal		
SVE-01 _ 092416 _LOB_TA_06	12:17	109	1360	M	Legal		
SVE-01 _ 092416 _LOB_TA_07	12:17	83	490	M	Legal		
SVE-01 _ 092416 _LOB_TA_08	12:17	83	480	M	Legal		
SVE-01 _ 092416 _LOB_TA_09	12:17	116	1290	M	Legal		
SVE-01 _ 092416 _LOB_TA_10	12:38	107	1010	M	Legal		
SVE-01 _ 092416 _LOB_TA_11	12:38	84	430	M	Legal		
SVE-01 _ 092416 _LOB_TA_12	12:38	85	500	M	Legal		
SVE-01 _ 092416 _LOB_TA_13	12:38	91	630	F	Legal		Not egging
SVE-01 _ 092416 _LOB_TA_14	12:38	105	1040	M	Legal		
SVE-01 _ 092416 _LOB_TA_15	12:38	123	1840	M	Legal		
SVE-01 _ 092416 _LOB_TA_16	12:52	124	1380	M	Legal		
SVE-01 _ 092416 _LOB_TA_17	12:57	99	840	M	Legal		
SVE-01 _ 092416 _LOB_TA_18	12:57	102	820	M	Legal		
SVE-01 _ 092416 _LOB_TA_19	12:57	138	2120	M	Legal		
SVE-01 _ 092416 _LOB_TA_20	12:57	130	1910	M	Legal		

Requested Analyses:

Analytes:	Total Hg,	Total Lipids
Methods:	1631e	NOAA 1993a
Container:	Ziplock	

Note: Lobster Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-14 Shellfish Sampling

Additional Questions:

MS/MSD Collected: **yes**

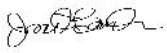
If yes, MS sample ID: SVE-01 _ 092416 _LOB_TA_MS_09

If yes, MSD sample ID: SVE-01 _ 092416 _LOB_TA_MD_09

General observations of habitat, abundance and diversity:

Large specimens up to 200kg were abundant at SVE vicinity

Were samples frozen? **yes**

Sampler Signature: 

Reviewed by: Lauren Tierney

Date: 1/3/2017

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SAMPLE COLLECTION LOG
LOBSTER TAILS

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092416	**Location ID:**	L9-45 (Turner Point)
Collectors:	JAB/ICD	**Lat/Long:**	44.428968 -68.820645
Media:	Tails (TA)	**Weather:**	Partly cloudy/rainy, cool
Species:	Lobster (LOB)	**Collection Method:**	Lobster trap

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Legal/ Sublegal	Photo Number	Notes: (deformities, lesions, etc.)
L9-45 _ 092416 _LOB_TA_01	0905	87	480	F	Legal		
L9-45 _ 092416 _LOB_TA_02	0905	88	530	M	Legal		
L9-45 _ 092416 _LOB_TA_03	0905	101	890	M	Legal		
L9-45 _ 092416 _LOB_TA_04	0905	86	520	F	Legal		
L9-45 _ 092416 _LOB_TA_05	0905	86	440	N	Legal		MS/MSD
L9-45 _ 092416 _LOB_TA_06	0905	94	690	M	Legal		
L9-45 _ 092416 _LOB_TA_07	0905	85	480	M	Legal		
L9-45 _ 092416 _LOB_TA_08	0905	97	620	M	Legal		
L9-45 _ 092416 _LOB_TA_09	0905	92	670	M	Legal		
L9-45 _ 092416 _LOB_TA_10	0905	84	450	F	Legal	P1090490	
L9-45 _ 092416 _LOB_TA_11	0905	85	530	F	Legal		
L9-45 _ 092416 _LOB_TA_12	0930	88	520	F	Legal		
L9-45 _ 092416 _LOB_TA_13	0930	93	690	F	Legal		
L9-45 _ 092416 _LOB_TA_14	0930	96	710	F	Legal		
L9-45 _ 092416 _LOB_TA_15	0930	85	530	M	Legal		
L9-45 _ 092416 _LOB_TA_16	0930	93	630	M	Legal		
L9-45 _ 092416 _LOB_TA_17	0930	85	530	M	Legal		
L9-45 _ 092416 _LOB_TA_18	0930	96	700	M	Legal		
L9-45 _ 092416 _LOB_TA_19	0930	85	450	M	Legal		
L9-45 _ 092416 _LOB_TA_20	0952	86	550	M	Legal		

Requested Analyses:

Analytes:	Total Hg,	Total Lipids
Methods:	1631e	NOAA 1993a
Container:	Ziplock	

Note: Lobster Sampling was conducted according to the following SOPs included in the QAPP; SOP S-14 Shellfish Sampling

Additional Questions:

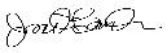
MS/MSD Collected: **yes**

If yes, MS sample ID: L9-45 _ 092416 _LOB_TA_MS_05

If yes, MSD sample ID: L9-45 _ 092416 _LOB_TA_MD_05

General observations of habitat, abundance and diversity:

Were samples frozen? **yes**

Sampler Signature: 

Reviewed by: Lauren Tierney

Date: 1/3/2017

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SAMPLE COLLECTION LOG
LOBSTER TAILS

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092616	**Location ID:**	HBI-01 (Harborside)
Collectors:	JAB	**Lat/Long:**	44.356067 -68.822976
Media:	Tails (TA)	**Weather:**	Sunny, cold
Species:	Lobster (LOB)	**Collection Method:**	Lobster trap

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Legal/ Sublegal	Photo Number	Notes: (deformities, lesions, etc.)
HBI-01 _ 092616 _LOB_TA_09	0835	83	480	F	Legal		
HBI-01 _ 092616 _LOB_TA_10	0839	89	590	F	Legal		
HBI-01 _ 092616 _LOB_TA_11	0847	102	890	M	Legal		
HBI-01 _ 092616 _LOB_TA_12	0901	92	640	M	Legal		
HBI-01 _ 092616 _LOB_TA_13	0835	81	330	M	Sublegal		
HBI-01 _ 092616 _LOB_TA_14	0843	79	460	F	Sublegal		
HBI-01 _ 092616 _LOB_TA_15	0843	80	450	M	Sublegal		
HBI-01 _ 092616 _LOB_TA_16	0843	79	420	M	Sublegal		
HBI-01 _ 092616 _LOB_TA_17	0847	80	470	F	Sublegal		
HBI-01 _ 092616 _LOB_TA_18	0914	81	460	M	Sublegal		
HBI-01 _ 092616 _LOB_TA_19	0914	81	410	F	Sublegal		
HBI-01 _ 092616 _LOB_TA_20	0914	75	330	M	Sublegal		
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e NOAA 1993a
Container:	Ziplock

Note: Lobster Sampling was conducted according to the following SOPs included in the QAPP; SOP S-14 Shellfish Sampling

Additional Questions:

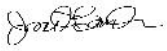
MS/MSD Collected: **no**

If yes, MS sample ID: NA

If yes, MSD sample ID: NA

General observations of habitat, abundance and diversity:

Were samples frozen? **yes**

Sampler Signature: 

Reviewed by: Lauren Tierney

Date: 1/3/2017

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092316	**Location ID:**	Mendall Marsh
Collectors:	JB, ICD	**Lat/Long:**	44.588756 -68.862448
Media:	Whole Body (WB)	**Weather:**	Partly cloudy, cool,gusty wind. Low 50s
Species:	Mummichog (MUM)	**Collection Method:**	Minnow trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
Mendall Marsh _ 092316 _MUM_WB_ 01	15:39	74	5		
Mendall Marsh _ 092316 _MUM_WB_ 02	15:43	79	6.9		
Mendall Marsh _ 092316 _MUM_WB_ 03	15:44	69	4		
Mendall Marsh _ 092316 _MUM_WB_ 03	15:47	41	1.1		
Mendall Marsh _ 092316 _MUM_WB_ 04	15:47	73	5		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No — If yes, MS sample ID: Na
QC Sample Types: Na — If yes, MSD sample ID: Na

General observations of habitat, abundance and diversity:
Hi abundance of shrimp, low killi fish

Were samples frozen? Yes

Sampler Signature:

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092516	**Location ID:**	OB-01
Collectors:	MM	**Lat/Long:**	44.6033 -68.8478
Media:	Whole Body (WB)	**Weather:**	Not recorded
Species:	Mummichog (MUM)	**Collection Method:**	Minnow Trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-01 _ 092516 _MUM_WB_ 01	13:29	69	3.7		
OB-01 _ 092516 _MUM_WB_ 02	13:31	48	1.3		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No — If yes, MS sample ID: NA
QC Sample Types: NA — If yes, MSD sample ID: NA
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature:

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092516	**Location ID:**	OB-05
Collectors:	MM, DL	**Lat/Long:**	44.7055 -68.8379
Media:	Whole Body (WB)	**Weather:**	Partly Cloudy/cool low 50s, gusty wind
Species:	Mummichog (MUM)	**Collection Method:**	Minnow Trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-05 _ 092516 _MUM_WB_ 01	11:31	61	2.5		
OB-05 _ 092516 _MUM_WB_ 01	11:30	42	0.8		
OB-05 092516 _MUM_WB_ 01	11:30	42	0.8		
OB-05 092516 _MUM_WB_ 02	11:30	56	1.9		
OB-05 092516 _MUM_WB_ 02	11:30	49	1.2		
OB-05 092516 _MUM_WB_ 02	11:30	58	2.2		
OB-05 092516 _MUM_WB_ 03	11:30	54	1.6		
OB-05 092516 _MUM_WB_ 03	11:30	50	1.3		
OB-05 092516 _MUM_WB_ 03	11:30	59	2.2		
OB-05 092516 _MUM_WB_ 04	11:30	51	1.4		
OB-05 092516 _MUM_WB_ 04	11:30	55	1.7		
OB-05 092516 _MUM_WB_ 04	11:30	57	1.9		
OB-05 092516 _MUM_WB_ 05	11:30	53	1.4		
OB-05 092516 _MUM_WB_ 05	11:30	51	1.6		
OB-05 092516 _MUM_WB_ 05	11:30	54	1.6		
OB-05 092516 _MUM_WB_ 05	11:30	50	1.4		
OB-05 092516 _MUM_WB_ 06	11:30	57	1.9		
OB-05 092516 _MUM_WB_ 06	11:30	56	1.8		
OB-05 092516 _MUM_WB_ 06	11:30	50	1.3		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

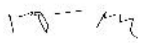
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No — If yes, MS sample ID: NA
QC Sample Types: NA — If yes, MSD sample ID: NA

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	9/28/2016	**Location ID:**	FRB-01
Collectors:	MKM, JB, DL	**Lat/Long:**	44.465131 -68.356255
Media:	Whole Body (WB)	**Weather:**	Sunny calm
Species:	Mummichog (MUM)	**Collection Method:**	Seine net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01 _ 092816 _MUM_WB_ 01		40.0	0.7		
FRB-01 _ 092816 _MUM_WB_ 01		39.0	0.4		
FRB-01 _ 092816 _MUM_WB_ 01		39.0	0.6		
FRB-01 _ 092816 _MUM_WB_ 01		50.0	1.5		
FRB-01 _ 092816 _MUM_WB_ 01		50.0	1.2		
FRB-01 _ 092816 _MUM_WB_ 02		46.0	1.0		
FRB-01 _ 092816 _MUM_WB_ 02		40.0	0.7		
FRB-01 _ 092816 _MUM_WB_ 02		41.0	0.8		
FRB-01 _ 092816 _MUM_WB_ 02		37.0	0.5		
FRB-01 _ 092816 _MUM_WB_ 03		53.0	1.7		
FRB-01 _ 092816 _MUM_WB_ 03		38.0	0.6		
FRB-01 _ 092816 _MUM_WB_ 03		42.0	0.8		
FRB-01 _ 092816 _MUM_WB_ 03		44.0	0.9		
FRB-01 _ 092816 _MUM_WB_ 04		59.0	2.3		
FRB-01 _ 092816 _MUM_WB_ 04		42.0	0.7		
FRB-01 _ 092816 _MUM_WB_ 04		44.0	0.8		
FRB-01 _ 092816 _MUM_WB_ 04		37.0	0.5		
FRB-01 _ 092816 _MUM_WB_ 05		49.0	1.4		
FRB-01 _ 092816 _MUM_WB_ 05		37.0	0.4		
FRB-01 _ 092816 _MUM_WB_ 05		50.0	1.3		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

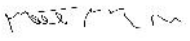
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No — If yes, MS sample ID: NA
QC Sample Types: NA — If yes, MSD sample ID: NA

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MKM, JB, DL	**Lat/Long:**	44.4729 -68.3565
Media:	Whole Body (WB)	**Weather:**	Calm
Species:	Mummichog (MUM)	**Collection Method:**	Seine net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01_092816_MUM_WB_05		48.0	1.3		
FRB-01_092816_MUM_WB_06		49.0	1.2		
FRB-01_092816_MUM_WB_06		53.0	1.7		
FRB-01_092816_MUM_WB_06		45.0	1.0		
FRB-01_092816_MUM_WB_06		41.0	0.6		
FRB-01_092816_MUM_WB_07		42.0	0.7		
FRB-01_092816_MUM_WB_07		43.0	0.7		
FRB-01_092816_MUM_WB_07		37.0	0.5		
FRB-01_092816_MUM_WB_07		47.0	1.1		
FRB-01_092816_MUM_WB_07		42.0	0.7		
FRB-01_092816_MUM_WB_08		50.0	1.4		
FRB-01_092816_MUM_WB_08		42.0	0.8		
FRB-01_092816_MUM_WB_08		41.0	0.7		
FRB-01_092816_MUM_WB_08		41.0	0.8		
FRB-01_092816_MUM_WB_09		57.0	2.5		
FRB-01_092816_MUM_WB_09		52.0	1.4		
FRB-01_092816_MUM_WB_10		40.0	0.6		
FRB-01_092816_MUM_WB_10		41.0	0.6		
FRB-01_092816_MUM_WB_10		40.0	0.8		
FRB-01_092816_MUM_WB_10		41.0	0.8		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

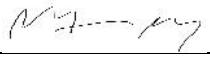
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes — If yes, MS sample ID: FRB-01_092816_MUM_WB_MS_01
QC Sample Types: MS,MSD — If yes, MSD sample ID: FRB-01_092816_MUM_WB_MD_01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MKM, JB, DL	**Lat/Long:**	44.4729 -68.3565
Media:	Whole Body (WB)	**Weather:**	Calm
Species:	Mummichog (MUM)	**Collection Method:**	Seine

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01_092816_MUM_WB_10		40.0	0.6		
FRB-01_092816_MUM_WB_11		73.0	4.8		
FRB-01_092816_MUM_WB_12		50.0	1.5		
FRB-01_092816_MUM_WB_12		51.0	1.6		
FRB-01_092816_MUM_WB_12		50.0	1.5		
FRB-01_092816_MUM_WB_13		45.0	0.9		
FRB-01_092816_MUM_WB_13		45.0	1.0		
FRB-01_092816_MUM_WB_13		46.0	1.0		
FRB-01_092816_MUM_WB_13		44.0	0.9		
FRB-01_092816_MUM_WB_14		54.0	1.7		
FRB-01_092816_MUM_WB_14		55.0	2.0		
FRB-01_092816_MUM_WB_14		51.0	1.6		
FRB-01_092816_MUM_WB_15		37.0	0.6		
FRB-01_092816_MUM_WB_15		39.0	0.5		
FRB-01_092816_MUM_WB_15		40.0	0.7		
FRB-01_092816_MUM_WB_15		40.0	0.6		
FRB-01_092816_MUM_WB_15		41.0	0.7		
FRB-01_092816_MUM_WB_15		40.0	0.7		
FRB-01_092816_MUM_WB_16		56.0	2.2		
FRB-01_092816_MUM_WB_16		55.0	2.0		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

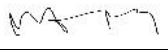
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes — If yes, MS sample ID: FRB-01_092816_MUM_WB_MS_01
QC Sample Types: MS,MSD — If yes, MSD sample ID: FRB-01_092816_MUM_WB_MD_01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MKM, JB, DL	**Lat/Long:**	44.4729 -68.3565
Media:	Whole Body (WB)	**Weather:**	Sunny, calm
Species:	Mummichog (MUM)	**Collection Method:**	Seine

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01_092816_MUM_WB_16		52.0	1.5		
FRB-01_092816_MUM_WB_17		42.0	0.7		
FRB-01_092816_MUM_WB_17		41.0	0.8		
FRB-01_092816_MUM_WB_17		40.0	0.7		
FRB-01_092816_MUM_WB_17		40.0	0.7		
FRB-01_092816_MUM_WB_17		40.0	0.7		
FRB-01_092816_MUM_WB_18		55.0	1.8		
FRB-01_092816_MUM_WB_18		54.0	2.0		
FRB-01_092816_MUM_WB_19		41.0	0.7		
FRB-01_092816_MUM_WB_19		42.0	0.8		
FRB-01_092816_MUM_WB_19		44.0	0.9		
FRB-01_092816_MUM_WB_19		44.0	0.7		
FRB-01_092816_MUM_WB_19		45.0	1.0		
FRB-01_092816_MUM_WB_20		37.0	0.6		
FRB-01_092816_MUM_WB_20		39.0	0.6		
FRB-01_092816_MUM_WB_20		39.0	0.5		
FRB-01_092816_MUM_WB_20		39.0	0.6		
FRB-01_092816_MUM_WB_20		37.0	0.5		
FRB-01_092816_MUM_WB_20		37.0	0.5		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

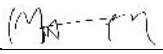
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: FRB-01_092816_MUM_WB_MS_01
QC Sample Types: MS,MSD
If yes, MSD sample ID: FRB-01_092816_MUM_WB_MD_01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MKM, JB, DL	**Lat/Long:**	44.4729 -68.3565
Media:	Whole Body (WB)	**Weather:**	Sunny calm
Species:	Mummichog (MUM)	**Collection Method:**	Seine

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01 _ 092816 _MUM_WB_ MS		40.0	0.7		
FRB-01 _ 092816 _MUM_WB_ MS		37.0	0.5		
FRB-01 _ 092816 _MUM_WB_ MS		40.0	0.7		
FRB-01 _ 092816 _MUM_WB_ MS		40.0	0.7		
FRB-01 _ 092816 _MUM_WB_ MS		41.0	0.7		
FRB-01 _ 092816 _MUM_WB_ MD		35.0	0.5		
FRB-01 _ 092816 _MUM_WB_ MD		35.0	0.4		
FRB-01 _ 092816 _MUM_WB_ MD		36.0	0.5		
FRB-01 _ 092816 _MUM_WB_ MD		36.0	0.5		
FRB-01 _ 092816 _MUM_WB_ MD		37.0	0.6		
FRB-01 _ 092816 _MUM_WB_ MD		39.0	0.6		
FRB-01 _ 092816 _MUM_WB_ MD		35.0	0.4		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: FRB-01 _ 092816 _MUM_WB_MS 01
QC Sample Types: MS,MSD
If yes, MSD sample ID: FRB-01 _ 092816 _MUM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	100316	**Location ID:**	OB-05
Collectors:	MKM,	**Lat/Long:**	44.697961 -68.840565
Media:	Whole Body (WB)	**Weather:**	Calm, sunny
Species:	Mummichog (MUM)	**Collection Method:**	Seine net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-05 _ 100316 _MUM_WB_ 07	09:30	55.0	2.5		
OB-05 _ 100316 _MUM_WB_ 08	09:30	64.0	2.6		
OB-05 _ 100316 _MUM_WB_ 09	09:30	65.0	3.1		
OB-05 _ 100316 _MUM_WB_ 10	09:30	61.0	3.1		
OB-05 _ 100316 _MUM_WB_ 11	09:30	56.0	1.5		
OB-05 _ 100316 _MUM_WB_ 11	09:30	50.0	1.0		
OB-05 _ 100316 _MUM_WB_ 12	09:30	57.0	2.3		
OB-05 _ 100316 _MUM_WB_ 13	09:30	58.0	2.0		
OB-05 _ 100316 _MUM_WB_ 13	09:30	55.0	1.5		
OB-05 _ 100316 _MUM_WB_ 14	09:30	56.0	1.9		
OB-05 _ 100316 _MUM_WB_ 14	09:30	45.0	1.0		
OB-05 _ 100316 _MUM_WB_ 15	09:30	55.0	2.0		
OB-05 _ 100316 _MUM_WB_ 15	09:30	45.0	0.6		
OB-05 _ 100316 _MUM_WB_ 16	09:30	55.0	1.8		
OB-05 _ 100316 _MUM_WB_ 16	09:30	50.0	0.9		
OB-05 _ 100316 _MUM_WB_ 17	09:30	50.0	1.3		
OB-05 _ 100316 _MUM_WB_ 17	09:30	50.0	1.5		
OB-05 _ 100316 _MUM_WB_ 18	09:30	55.0	2.2		
OB-05 _ 100316 _MUM_WB_ 19	09:30	50.0	1.3		
OB-05 _ 100316 _MUM_WB_ 19	09:30	55.0	2.0		

Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

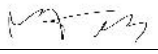
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected:	Yes	If yes, MS sample ID:	OB-05 _ 100316 _MUM_WB_MS 20
QC Sample Types:	MS,MSD	If yes, MSD sample ID:	OB-05 _ 100316 _MUM_WB_MD 20

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	100316	**Location ID:**	OB-05
Collectors:	MKM, ID	**Lat/Long:**	44.697961 -68.840565
Media:	Whole Body (WB)	**Weather:**	Calm, sunny
Species:	Mummichog (MUM)	**Collection Method:**	Seine net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-05 _ 100316 _MUM_WB_ 20	09:30	51.0	1.5		MS/MSD
OB-05 _ 100316 _MUM_WB_ 20	09:30	55.0	1.9		MS/MSD
OB-05 _ 100316 _MUM_WB_ 20	09:30	50.0	1.0		MS/MSD
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

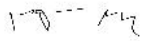
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: OB-05 _ 100316 _MUM_WB_MS 20
QC Sample Types: MS,MSD
If yes, MSD sample ID: OB-05 _ 100316 _MUM_WB_MD 20

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	100316	**Location ID:**	BO-04
Collectors:	MKMID	**Lat/Long:**	44.7628 -68.8014
Media:	Whole Body (WB)	**Weather:**	Calm, 50s
Species:	Mummichog (MUM)	**Collection Method:**	Seine Net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
BO-04 _ 100316 _MUM_WB_ 01	10:35	90.0	7.1		MS/MSD
BO-04 _ 100316 _MUM_WB_ 02	10:35	66.0	3.2		
BO-04 _ 100316 _MUM_WB_ 03	10:35	81.0	5.3		
BO-04 _ 100316 _MUM_WB_ 04	10:35	68.0	3.6		
BO-04 _ 100316 _MUM_WB_ 05	10:35	79.0	4.5		
BO-04 _ 100316 _MUM_WB_ 06	10:35	69.0	3.8		
BO-04 _ 100316 _MUM_WB_ 07	10:35	69.0	3.4		
BO-04 _ 100316 _MUM_WB_ 08	10:35	71.0	4.1		
BO-04 _ 100316 _MUM_WB_ 09	10:35	64.0	3.5		
BO-04 _ 100316 _MUM_WB_ 10	10:35	61.0	2.4		
BO-04 _ 100316 _MUM_WB_ 10	10:35	46.0	1.1		
BO-04 _ 100316 _MUM_WB_ 11	10:35	61.0	2.6		
BO-04 _ 100316 _MUM_WB_ 12	10:35	70.0	4.5		
BO-04 _ 100316 _MUM_WB_ 13	10:35	65.0	3.5		
BO-04 _ 100316 _MUM_WB_ 14	10:35	64.0	2.6		
BO-04 _ 100316 _MUM_WB_ 15	10:35	66.0	2.5		
BO-04 _ 100316 _MUM_WB_ 16	10:35	60.0	2.0		
BO-04 _ 100316 _MUM_WB_ 16	10:35	51.0	1.8		
BO-04 _ 100316 _MUM_WB_ 17	10:35	64.0	2.3		
BO-04 _ 100316 _MUM_WB_ 18	10:35	61.0	2.5		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
QC Sample Types: MS,MSD
If yes, MS sample ID: BO-04 _ 100316 _MUM_WB_MS 01
If yes, MSD sample ID: BO-04 _ 100316 _MUM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	100316	**Location ID:**	BO-04
Collectors:	MKM, ID	**Lat/Long:**	44.7628 -68.8014
Media:	Whole Body (WB)	**Weather:**	Calm, sunny
Species:	Mummichog (MUM)	**Collection Method:**	Seine Net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
BO-04 _ 100316 _MUM_WB_ 19		59.0	2.0		
BO-04 _ 100316 _MUM_WB_ 19		60.0	2.0		
BO-04 _ 100316 _MUM_WB_ 20		58.0	2.4		
BO-04 _ 100316 _MUM_WB_ 20		46.0	0.5		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
QC Sample Types: MS,MSD
If yes, MS sample ID: BO-04 _ 100316 _MUM_WB_MS 01
If yes, MSD sample ID: BO-04 _ 100316 _MUM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: MKM

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092116	**Location ID:**	OB-05
Collectors:	JB/MM	**Lat/Long:**	44.6663 -68.8177
Media:	Whole Body (WB)	**Weather:**	Clear, hot
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Trawl

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-05 _ 092116 _RAS_WB_ 01	15:00	202	45		Collected by NOAA

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish Sampling was conducted by NOAA scientist Christine Lipsky

Additional Questions:

Additional QC Collected: No
If yes, MS sample ID: NA
QC Sample Types: NA
If yes, MSD sample ID: NA
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature:

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092516	**Location ID:**	ES-13
Collectors:	JB/MM	**Lat/Long:**	44.4973 -68.7833
Media:	Whole Body (WB)	**Weather:**	Clear, hot
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Trawl

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-13 _ 092516 _RAS_WB_ 01	12:04	190	35		Collected by NOAA trawl station 5
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish Sampling was conducted by NOAA

Additional Questions:

Additional QC Collected: No — If yes, MS sample ID: NA
QC Sample Types: NA — If yes, MSD sample ID: NA
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: _____

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092216	**Location ID:**	OB-01
Collectors:	JB/MM	**Lat/Long:**	44.6135 -68.8413
Media:	Whole Body (WB)	**Weather:**	Clear, hot
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Trawl

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-01 _ 092216 _RAS_WB_ 01	13:34	202	45		Collected by NOAA
OB-01 _ 092216 _RAS_WB_ 02	13:34	150	18		
OB-01 _ 092216 _RAS_WB_ 03	13:34	195	45		
OB-01 _ 092216 _RAS_WB_ 04	13:34	105	5		
OB-01 092216 _RAS_WB_ 05	13:34	229	71.5		
OB-01 092216 _RAS_WB_ 06	12:54	190	38		
OB-01 092216 _RAS_WB_ 07	12:54	211	54		
OB-01 092216 _RAS_WB_ 08	12:54	185	34		
OB-01 092216 _RAS_WB_ 09	12:54	182	34		
OB-01 092216 _RAS_WB_ 10	12:54	212	54		
OB-01 092216 _RAS_WB_ 11	12:54	212	51		
OB-01 092216 _RAS_WB_ 12	12:54	189	36		
OB-01 092216 _RAS_WB_ 13	12:54	145	16		
OB-01 092216 _RAS_WB_ 14	12:54	196	43		
OB-01 092216 _RAS_WB_ 15	12:54	177	31		
OB-01 092216 _RAS_WB_ 16	12:54	201	47		
OB-01 092216 _RAS_WB_ 17	12:54	181	33		
OB-01 092216 _RAS_WB_ 18	12:54	184	33		
OB-01 092216 _RAS_WB_ 19	12:54	160	23		
OB-01 092216 _RAS_WB_ 20	12:54	193	40		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

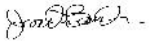
Note: Fish Sampling was conducted by NOAA scientist Christine Lipsky

Additional Questions:

Additional QC Collected: Yes — If yes, MS sample ID: OB-01 _ 092216 _RAS_WB_MS 01
QC Sample Types: MS,MSD — If yes, MSD sample ID: OB-01 _ 092216 _RAS_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-FP
Collectors:	MM, DL	**Lat/Long:**	44.4719 -68.8169
Media:	Whole Body (WB)	**Weather:**	Calm,cloudy
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Seine net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-FP _ 092716 _RAS_WB_ 01	11:30	120.0	12.0		QC sample
ES-FP _ 092716 _RAS_WB_ 02	11:30	122.0	9.0		
ES-FP _ 092716 _RAS_WB_ 03	11:30	107.0	7.0		
ES-FP _ 092716 _RAS_WB_ 04	11:30	134.0	12.0		
ES-FP _ 092716 _RAS_WB_ 05	11:30	95.0	5.0		
ES-FP _ 092716 _RAS_WB_ 06	11:30	107.0	6.0		
ES-FP _ 092716 _RAS_WB_ 07	11:30	107.0	6.0		
ES-FP _ 092716 _RAS_WB_ 08	11:30	124.0	10.0		
ES-FP _ 092716 _RAS_WB_ 09	11:30	132.0	12.0		
ES-FP _ 092716 _RAS_WB_ 10	11:30	101.0	5.0		
ES-FP _ 092716 _RAS_WB_ 11	11:30	127.0	11.0		
ES-FP _ 092716 _RAS_WB_ 12	11:30	150.0	7.5		
ES-FP _ 092716 _RAS_WB_ 13	11:30	115.0	8.0		
ES-FP _ 092716 _RAS_WB_ 14	11:30	112.0	7.0		
ES-FP _ 092716 _RAS_WB_ 15	11:30	101.0	5.5		
ES-FP _ 092716 _RAS_WB_ 16	11:30	106.0	5.0		
ES-FP _ 092716 _RAS_WB_ 17	11:30	100.0	5.0		
ES-FP _ 092716 _RAS_WB_ 18	11:30	100.0	5.1		
ES-FP _ 092716 _RAS_WB_ 19	11:30	97.0	4.7		
ES-FP _ 092716 _RAS_WB_ 19	11:30	85.0	3.2		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

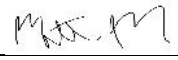
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: ES-FP _ 092716 _RAS_WB_MS 01
QC Sample Types: MS,MSD
If yes, MSD sample ID: ES-FP _ 092716 _RAS_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-FP
Collectors:	MM, DL	**Lat/Long:**	44.4719 -68.8169
Media:	Whole Body (WB)	**Weather:**	Calm, cloudy
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Seine net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-FP _ 092716 _RAS_WB_ 20		101.0	4.8		
ES-FP _ 092716 _RAS_WB_ 20		99.0	4.8		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

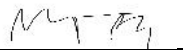
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: ES-FP _ 092716 _RAS_WB_MS 01
QC Sample Types: MS,MSD
If yes, MSD sample ID: ES-FP _ 092716 _RAS_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MM, DL, JB	**Lat/Long:**	44.4729 -68.3565
Media:	Whole Body (WB)	**Weather:**	Calm
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Seine Net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01_092816_RAS_WB_01		82.0	2.7		
FRB-01_092816_RAS_WB_01		70.0	1.7		
FRB-01_092816_RAS_WB_02		81.0	2.4		
FRB-01_092816_RAS_WB_02		69.0	1.3		
FRB-01_092816_RAS_WB_03		70.0	1.8		
FRB-01_092816_RAS_WB_03		78.0	2.5		
FRB-01_092816_RAS_WB_04		72.0	1.8		
FRB-01_092816_RAS_WB_04		73.0	1.9		
FRB-01_092816_RAS_WB_05		85.0	3.2		
FRB-01_092816_RAS_WB_05		70.0	1.4		
FRB-01_092816_RAS_WB_06		91.0	3.4		
FRB-01_092816_RAS_WB_06		71.0	1.8		
FRB-01_092816_RAS_WB_07		86.0	2.6		
FRB-01_092816_RAS_WB_07		78.0	2.1		
FRB-01_092816_RAS_WB_08		70.0	1.7		
FRB-01_092816_RAS_WB_08		80.0	2.8		
FRB-01_092816_RAS_WB_09		81.0	2.4		
FRB-01_092816_RAS_WB_09		73.0	1.9		
FRB-01_092816_RAS_WB_10		77.0	2.3		
FRB-01_092816_RAS_WB_10		74.0	2.0		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

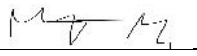
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No — If yes, MS sample ID: FRB-01_092816_RAS_WB_MS 20
QC Sample Types: NA — If yes, MSD sample ID: FRB-01_092816_RAS_WB_MD 20

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MM, DL, JB	**Lat/Long:**	44.4729 -68.3565
Media:	Whole Body (WB)	**Weather:**	Calm
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Seine Net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01 _ 092816 _RAS_WB_ 11		80.0	2.2		
FRB-01 _ 092816 _RAS_WB_ 11		67.0	1.3		
FRB-01 _ 092816 _RAS_WB_ 11		70.0	1.9		
FRB-01 _ 092816 _RAS_WB_ 12		83.0	2.6		
FRB-01 _ 092816 _RAS_WB_ 12		67.0	1.3		
FRB-01 _ 092816 _RAS_WB_ 13		71.0	1.6		
FRB-01 _ 092816 _RAS_WB_ 13		75.0	2.3		
FRB-01 _ 092816 _RAS_WB_ 14		80.0	2.4		
FRB-01 _ 092816 _RAS_WB_ 14		75.0	1.9		
FRB-01 _ 092816 _RAS_WB_ 15		87.0	3.1		
FRB-01 _ 092816 _RAS_WB_ 15		60.0	1.1		
FRB-01 _ 092816 _RAS_WB_ 16		76.0	2.3		
FRB-01 _ 092816 _RAS_WB_ 16		64.0	1.1		
FRB-01 _ 092816 _RAS_WB_ 17		85.0	3.0		
FRB-01 _ 092816 _RAS_WB_ 17		50.0	0.6		
FRB-01 _ 092816 _RAS_WB_ 18		91.0	3.5		
FRB-01 _ 092816 _RAS_WB_ 19		55.0	0.8		
FRB-01 _ 092816 _RAS_WB_ 19		69.0	1.6		
FRB-01 _ 092816 _RAS_WB_ 19		69.0	1.4		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No
If yes, MS sample ID: FRB-01 _ 092816 _RAS_WB_MS 20
QC Sample Types: NA
If yes, MSD sample ID: FRB-01 _ 092816 _RAS_WB_MD 20
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature:

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092816	**Location ID:**	FRB-01
Collectors:	MM, DL, JB	**Lat/Long:**	44.4729 -68.3565
Media:	Whole Body (WB)	**Weather:**	Calm
Species:	Rainbow Smelt (RAS)	**Collection Method:**	Seine Net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01 _ 092816 _RAS_WB_ 20		82.0	2.4		QC
FRB-01 _ 092816 _RAS_WB_ 20		75.0	1.8		
FRB-01 _ 092816 _RAS_WB_ 20		75.0	1.8		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

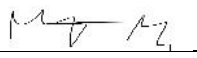
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: FRB-01 _ 092816 _RAS_WB_MS 20
QC Sample Types: MS,MSD
If yes, MSD sample ID: FRB-01 _ 092816 _RAS_WB_MD 20

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
EEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	080216	**Location ID:**	OB-01
Collectors:	DL, DC	**Lat/Long:**	44.36.376 68.50.713
Media:	Whole Body (WB)	**Weather:**	Fair
Species:	American Eel (EEL)	**Collection Method:**	Eels Traps - Horseshoe Crabs

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Photo Number	Notes
OB-01 _ 080216 _EEL_WB_ 01	09:15	390	140.0			
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA

Otolith? No
Were samples frozen? Yes
General observations of habitat, abundance and diversity:

Habitat on stream bottom dominated by wood chips, trap was half full of chips. Also caught numerous green crabs. Out of 12 traps, only one eel was caught, indicating low abundance.

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
EEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	080316	**Location ID:**	OB-05
Collectors:	DC, DL	**Lat/Long:**	44.7055 -68.8379
Media:	Whole Body (WB)	**Weather:**	Fair, 70's
Species:	American Eel (EEL)	**Collection Method:**	Eels Traps - Salted Herring/Catfood Bait

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Photo Number	Notes
OB-05 _ 080316 _EEL_WB_ 01	08:16	380	120.0			
OB-05 _ 080316 _EEL_WB_ 02	08:30	390	150.0			
OB-05 _ 080316 _EEL_WB_ 03	08:40	370	100.0			
OB-05 _ 080316 _EEL_WB_ 04	08:44	340	90.0			
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA

Otolith? No
Were samples frozen? Yes
General observations of habitat, abundance and diversity:

Low abundance low diversity

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
EEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	080516	**Location ID:**	BO-04
Collectors:	DC, DL	**Lat/Long:**	44.7553 -68.8149
Media:	Whole Body (WB)	**Weather:**	Fair, 70's
Species:	American Eel (EEL)	**Collection Method:**	Eels Traps - Salted Herring/Catfood Bait

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Photo Number	Notes
BO-04 _ 080516 _EEL_WB_ 01	08:45	400	140.0			
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA
Otolith?	No		
Were samples frozen?	Yes		

General observations of habitat, abundance and diversity:

Low abundance and low diversity

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
EEL WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	080516	**Location ID:**	OB-05
Collectors:	DC, DL, MM	**Lat/Long:**	44.7055 -68.8379
Media:	Whole Body (WB)	**Weather:**	Fair, 70's
Species:	American Eel (EEL)	**Collection Method:**	Eels Traps - Salted Herring/Catfood Bait

Sample ID	Time	Length (mm)	Weight (grams)	Sex F/M	Photo Number	Notes
OB-05 _ 080516 _EEL_WB_ 05	09:23	380	120.0			
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Requested Analyses:

Analytes:	Total Hg, Total Lipids
Methods:	1631e, NOAA 1993a
Container:	Ziplock

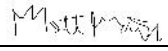
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected:	No	If yes, MS sample ID:	NA
QC Samples Types:	NA	If yes, MSD sample ID:	NA

Otolith? No
Were samples frozen? Yes
General observations of habitat, abundance and diversity:

Low abundance low diversity

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/29/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092416	**Location ID:**	OB-01
Collectors:	MM, DL	**Lat/Long:**	44.603238 -68.850095
Media:	Whole Body (WB)	**Weather:**	Fair, windy
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Hoop Trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-01 _ 092416 _TOM_WB_ 01	12:00	202	45		
OB-01 _ 092416 _TOM_WB_ 02	12:00	150	18		
OB-01 _ 092416 _TOM_WB_ 03	12:00	195	45		
OB-01 _ 092416 _TOM_WB_ 04	12:00	105	5		
OB-01 092416 _TOM_WB_ 05	12:00	229	71.5		
OB-01 092416 _TOM_WB_ 06	12:00	190	38		
OB-01 092416 _TOM_WB_ 07	12:00	211	54		
OB-01 092416 _TOM_WB_ 08	12:00	185	34		
OB-01 092416 _TOM_WB_ 09	12:00	182	34		
OB-01 092416 _TOM_WB_ 10	12:00	212	54		
OB-01 092416 _TOM_WB_ 11	12:00	212	51		
OB-01 092416 _TOM_WB_ 12	12:00	189	36		
OB-01 092416 _TOM_WB_ 13	12:00	145	16		
OB-01 092416 _TOM_WB_ 14	12:00	196	43		
OB-01 092416 _TOM_WB_ 15	12:00	177	31		
OB-01 092416 _TOM_WB_ 16	12:00	201	47		
OB-01 092416 _TOM_WB_ 17	12:00	181	33		
OB-01 092416 _TOM_WB_ 18	12:00	184	33		
OB-01 092416 _TOM_WB_ 19	12:00	160	23		
OB-01 092416 _TOM_WB_ 20	12:00	193	40		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

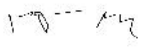
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes — If yes, MS sample ID: OB-01 _ 092416 _TOM_WB_MS 04
QC Sample Types: MS,MSD — If yes, MSD sample ID: OB-01 _ 092416 _TOM_WB_MD 04

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092516	**Location ID:**	BO-04
Collectors:	JB, ICD	**Lat/Long:**	44.7553 -68.8149
Media:	Whole Body (WB)	**Weather:**	Partly cloudy, cool,gusty wind. Low 50s
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
BO-04 _ 092516 _TOM_WB_ 01	10:26	186	41		
BO-04 _ 092516 _TOM_WB_ 02	10:26	144	14		
BO-04 _ 092516 _TOM_WB_ 03	11:00	116	11		
BO-04 _ 092516 _TOM_WB_ 04	10:10	143	20		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

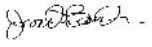
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: BO-04 _ 092516 _TOM_WB_MS 01
QC Sample Types: MS,MSD
If yes, MSD sample ID: BO-04 _ 092516 _TOM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092516	**Location ID:**	OB-05
Collectors:	JB, ICD	**Lat/Long:**	44.7055 -68.8379
Media:	Whole Body (WB)	**Weather:**	Partly Cloudy/cool low 50s, gusty wind
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-05 _ 092516 _TOM_WB_ 01	11:30	166	33.0		
OB-05 _ 092516 _TOM_WB_ 02	11:30	98	7.0		
OB-05 _ 092516 _TOM_WB_ 03	11:00	122	14.0		
OB-05 _ 092516 _TOM_WB_ 04	11:00	133	16.0		
OB-05 _ 092516 _TOM_WB_ 05					
OB-05 _ 092516 _TOM_WB_ 06					
OB-05 _ 092516 _TOM_WB_ 07					
OB-05 _ 092516 _TOM_WB_ 08					
OB-05 _ 092516 _TOM_WB_ 09					
OB-05 _ 092516 _TOM_WB_ 10					
OB-05 _ 092516 _TOM_WB_ 11					
OB-05 _ 092516 _TOM_WB_ 12					
OB-05 _ 092516 _TOM_WB_ 13					

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

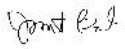
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: OB-05 _ 092516 _TOM_WB_MS 06
QC Sample Types: MS,MSD
If yes, MSD sample ID: OB-05 _ 092516 _TOM_WB_MD 06

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092516	**Location ID:**	OB-05
Collectors:	MM, DL	**Lat/Long:**	44.7055 -68.8379
Media:	Whole Body (WB)	**Weather:**	Partly Cloudy/cool low 50s, gusty wind
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-05 _ 092516 _TOM_WB_ 14	11:30	166	33.0		
OB-05 _ 092516 _TOM_WB_ 15	11:30	98	7.0		
OB-05 092516 _TOM_WB_ 16	11:00	122	14.0		
OB-05 092516 _TOM_WB_ 17	11:00	133	16.0		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No
If yes, MS sample ID: NA
QC Sample Types: NA
If yes, MSD sample ID: NA
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature:

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092616	**Location ID:**	OB-05
Collectors:	JB, ICD	**Lat/Long:**	44.7055 -68.8379
Media:	Whole Body (WB)	**Weather:**	Really calm no wind
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Hoop net

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
OB-05 _ 092616 _TOM_WB_ 18	10:05	117	12.0		

Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

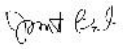
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: OB-05 _ 092616 _TOM_WB_MS 06
QC Sample Types: MS,MSD
If yes, MSD sample ID: OB-05 _ 092616 _TOM_WB_MD 06

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-FP
Collectors:	MM, DL	**Lat/Long:**	44.4719 -68.8169
Media:	Whole Body (WB)	**Weather:**	Calm,cloudy
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel Trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-FP _ 092716 _TOM_WB_ 01	08:15	232.0	130.0		MS/MSD
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes If yes, MS sample ID: ES-FP _ 092716 _TOM_WB_MS 01
QC Sample Types: MS,MSD If yes, MSD sample ID: ES-FP _ 092716 _TOM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: MM

Reviewed by: Lauren Tierney
Date: 12/30/2016

amec foster wheeler

SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092716	**Location ID:**	ES-13
Collectors:	JB	**Lat/Long:**	44.505425 -68.766915
Media:	Whole Body (WB)	**Weather:**	Calm, cloudy
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-13 _ 092716 _TOM_WB_ 01	10:05	146.0	23.0		
ES-13 _ 092716 _TOM_WB_ 02	10:08	144.0	20.0		
ES-13 _ 092716 _TOM_WB_ 03	10:21	137.0	20.0		
ES-13 _ 092716 _TOM_WB_ 04	10:23	166.0	35.0		MS/MSD
ES-13 _ 092716 _TOM_WB_ 05	10:59	147.0	24.0		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

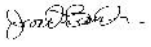
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: ES-13 _ 092716 _TOM_WB_MS 04
QC Sample Types: MS,MSD
If yes, MSD sample ID: ES-13 _ 092716 _TOM_WB_MD 04

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092916	**Location ID:**	FRB-01
Collectors:	DL, MM, ID	**Lat/Long:**	44.465131 -68.356255
Media:	Whole Body (WB)	**Weather:**	Warm, clear
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
FRB-01 _ 092916 _TOM_WB_ 01	12:00	152.0	28.0		
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

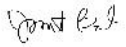
Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: Yes
If yes, MS sample ID: FRB-01 _ 092916 _TOM_WB_MS 01
QC Sample Types: MS,MSD
If yes, MSD sample ID: FRB-01 _ 092916 _TOM_WB_MD 01

General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

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SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	092916	**Location ID:**	ES-13
Collectors:	JB,KB	**Lat/Long:**	44.507770 -68.764564
Media:	Whole Body (WB)	**Weather:**	Sunny windy rough seas 50 deg F
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-13 _ 092916 _TOM_WB_ 06	10:01	168.0	34.0	Na	ES13_092916_TOM_WB_06 Trap 08
ES-13 _ 092916 _TOM_WB_ 07	10:05	204.0	63.0	Na	ES13_092916_TOM_WB_07 Trap 24
ES-13 _ 092916 _TOM_WB_ 08	10:15	194.0	62.0	Na	ES13_092916_TOM_WB_08 Trap 15
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Requested Analyses:

Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No
If yes, MS sample ID: Na
QC Sample Types: Na
If yes, MSD sample ID: Na
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature:

Reviewed by: Lauren Tierney
Date: 12/30/2016

amec foster wheeler

SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	093016	**Location ID:**	ES-13
Collectors:	JB,KB	**Lat/Long:**	44.506945 -68.765933
Media:	Whole Body (WB)	**Weather:**	Sunny calm 50 deg F
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel trap

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-13 _ 093016 _TOM_WB_ 09	11:24	238.0	110.0	Na	ES13_092916_TOM_WB_09 Trap 42
ES-13 _ 093016 _TOM_WB_ 10	12:24	189.0	48.0	Na	ES13_092916_TOM_WB_10 Trap 16
ES-13 _ 093016 _TOM_WB_ 11	12:24	139.0	22.0	Na	ES13_092916_TOM_WB_11 Trap 16
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Requested Analyses:

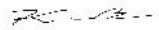
Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No
If yes, MS sample ID: NA
QC Sample Types: Na
If yes, MSD sample ID: NA
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 12/30/2016

amec foster wheeler

SAMPLE COLLECTION LOG
FISH WHOLE BODY

Project Name:	USDC Penobscot River	**Project Number:**	3616166052.04.05
Date:	100116	**Location ID:**	ES-FP
Collectors:	JB	**Lat/Long:**	44.471106 -68.805967
Media:	Whole Body (WB)	**Weather:**	Overcast, cool, 50s
Species:	Atlantic Tomcod (TOM)	**Collection Method:**	Eel traps

Sample ID	Time	Length (mm)	Weight (grams)	Photo Number	Notes
ES-FP _ 100116 _TOM_WB_ 02	09:11	209.0	76.0		
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Requested Analyses:

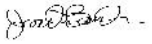
Analytes: Total Hg, Total Lipids
Methods: 1631e, NOAA 1993a
Container: Ziplock

Note: Fish/Eel Sampling was conducted according to the following SOPs included in the QAPP;
SOP S-12 Fish Sampling Procedures
SOP S-13 Fish Sample Processing and Handling Procedures

Additional Questions:

Additional QC Collected: No
If yes, MS sample ID: NA
QC Sample Types: NA
If yes, MSD sample ID: NA
General observations of habitat, abundance and diversity:

Were samples frozen? Yes

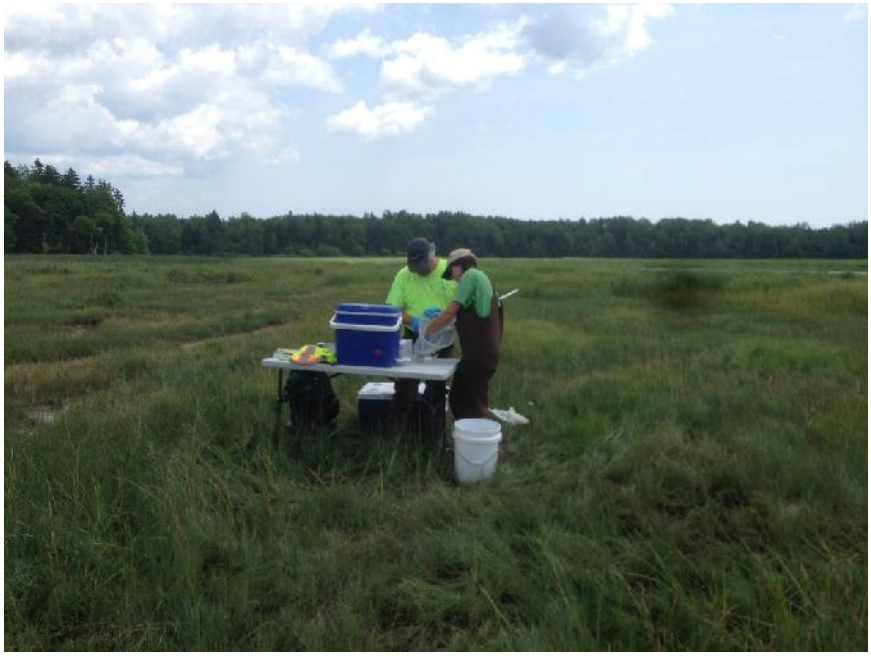
Sampler Signature: 

Reviewed by: Lauren Tierney
Date: 1/3/2017

APPENDIX B-2
2016 Field Activity Photographs

Penobscot River Phase III – Engineering Study
Penobscot River, Maine

Photographic Log

	Client: United States District Court District of Maine Location: Addison Project No.: 3616166052 Date: 7/21/2016 Photo No.: 1 Photographer: Louise Venne Description: Terrestrial Insects and spiders being captured in butterfly nets.
	Client: United States District Court District of Maine Location: Addison Project No.: 3616166052 Date: 7/21/2016 Photo No.: 2 Photographer: Louise Venne Description: Terrestrial insects and spiders being separated and sorted from butterfly nets into sample jars.

	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/26/2016 Photo No.: 3 Photographer: Julie Pallozzi Description: Spider sample MMSW-C_072616_SPI_WB_03.
	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 4 Photographer: Danielle Lerner Description: Mist net set for songbird capture.

	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 5 Photographer: Danielle Lerner Description: Mist net along drainage channel for songbird capture.
	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 6 Photographer: Danielle Lerner Description: Mist net set for song bird collection in tall grass.

	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 7 Photographer: Danielle Lerner Description: Nelson's Sparrow being sized for banding.
	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 8 Photographer: Danielle Lerner Description: Capillary tube for blood sample collection being filled from Nelson's Sparrow.

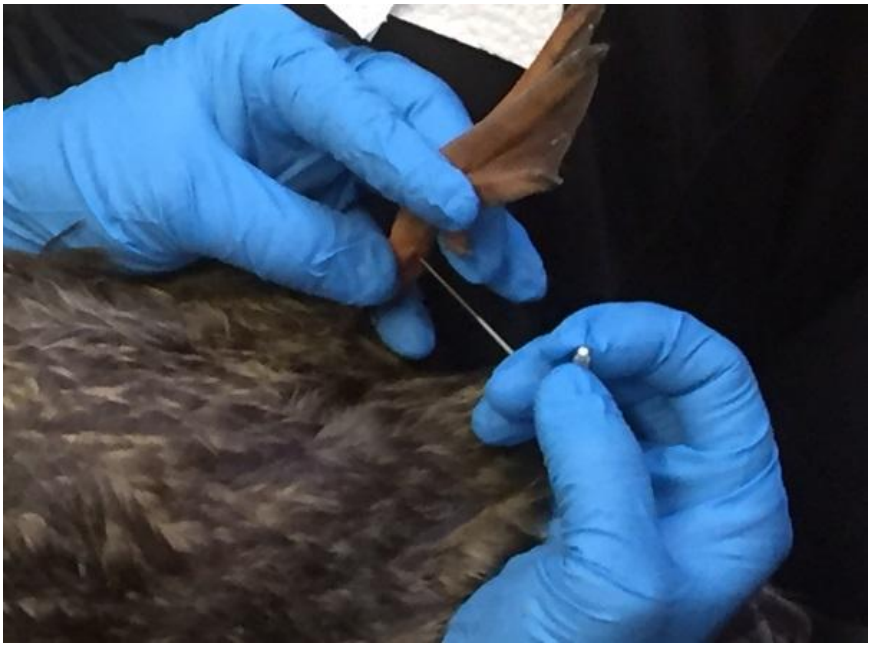
	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 9 Photographer: Danielle Lerner Description: Measurements taken from Red Winged Black Bird.
	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 10 Photographer: Danielle Lerner Description: Just prior to release of a Red winged Black Bird.

	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 7/21/2016 Photo No.: 11 Photographer: Danielle Lerner Description: Just prior to release of a Nelson's Sparrow.
	Client: United States District Court District of Maine Location: Addison Project No.: 3616166052 Date: 7/23/2016 Photo No.: 12 Photographer: Louise Venne Description: Representative Nelson's Sparrow after banding and blood sample ready for release.

	Client: United States District Court District of Maine Location: Searsport Penobscot study area Project No.: 3616166052 Date: 1/23/2017 Photo No.: 13 Photographer: Louise Venne Description: Representative American Black Duck trap baited with corn
	Client: United States District Court District of Maine Location: South Verona Island Project No.: 3616166052 Date: 1/27/2017 Photo No.: 14 Photographer: Louise Venne Description: Cannon net set up for American Black Duck capture.

	Client: United States District Court District of Maine Location: Mendall Marsh Southwest Project No.: 3616166052 Date: 1/24/2017 Photo No.: 15 Photographer: Amec Foster Wheeler Representative Description: American Black Ducks in trap.
	Client: United States District Court District of Maine Location: Winterport Field Station Project No.: 3616166052 Date: 1/22/2017 Photo No.: 16 Photographer: Amec Foster Wheeler Representative Description: Aging American Black Duck.

	Client: United States District Court District of Maine Location: Winterport Field Station Project No.: 3616166052 Date: 1/22/2017 Photo No.: 17 Photographer: Amec Foster Wheeler Representative Description: Using the bill to sex American Black Duck.
	Client: United States District Court District of Maine Location: Winterport Field Station Project No.: 3616166052 Date: 1/22/2017 Photo No.: 18 Photographer: Amec Foster Wheeler Representative Description: Aging American Black Duck.

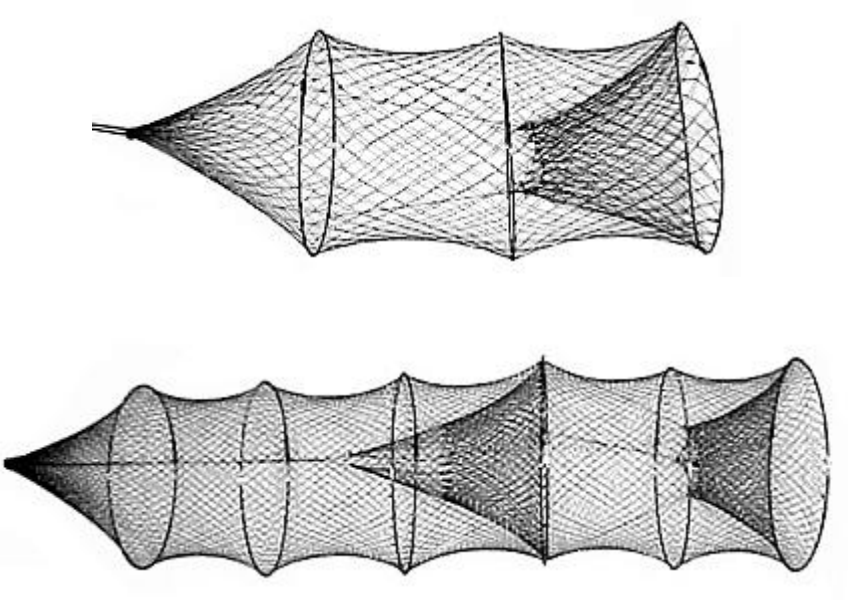
	Client: United States District Court District of Maine Location: Winterport Field Station Project No.: 3616166052 Date: 1/24/2017 Photo No.: 19 Photographer: Amec Foster Wheeler Representative Description: Sampling blood from American Black Duck.
	Client: United States District Court District of Maine Location: Project No.: 3616166052 Date: 1/24/2017 Photo No.: 20 Photographer: Amec Foster Wheeler Representative Description: Close-up sampling blood from American Black Duck.

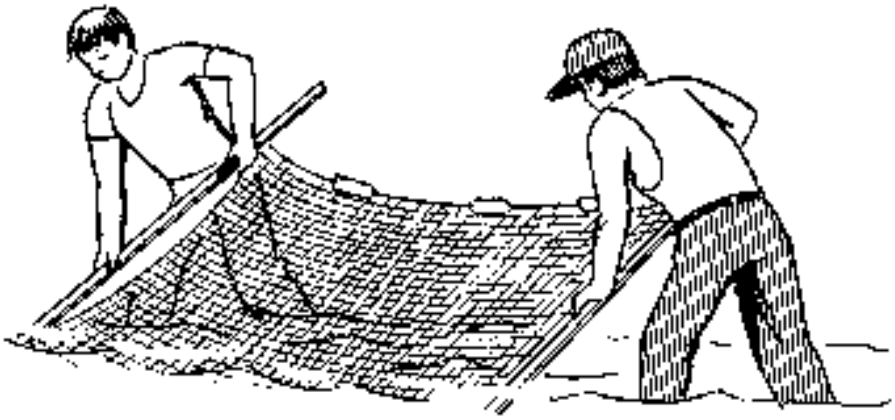
	Client: United States District Court District of Maine Location: Winterport Field Station Project No.: 3616166052 Date: 1/24/2017 Photo No.: 21 Photographer: Amec Foster Wheeler Representative Description: Polychaete sample: ES-13_072716_POL_WB_02
	Client: United States District Court District of Maine Location: Onboard lobster boat in Penobscot River study area Project No.: 3616166052 Date: 9/25/2016 Photo No.: 22 Photographer: Jon Bourdeau Description: Representative large eel in eel trap

	Client: United States District Court District of Maine Location: OB-01 Project No.: 3616166052 Date: 9/21/2016 Photo No.: 23 Photographer: Jonathan Bourdeau Description: Rainbow smelt sample OB-01-092116_RAS_WB_19
	Client: United States District Court District of Maine Location: South Verona Island Project No.: 3616166052 Date: 9/29/2016 Photo No.: 24 Photographer: Kendra Bavor Description: Tomcod fish sample caught in eel trap.

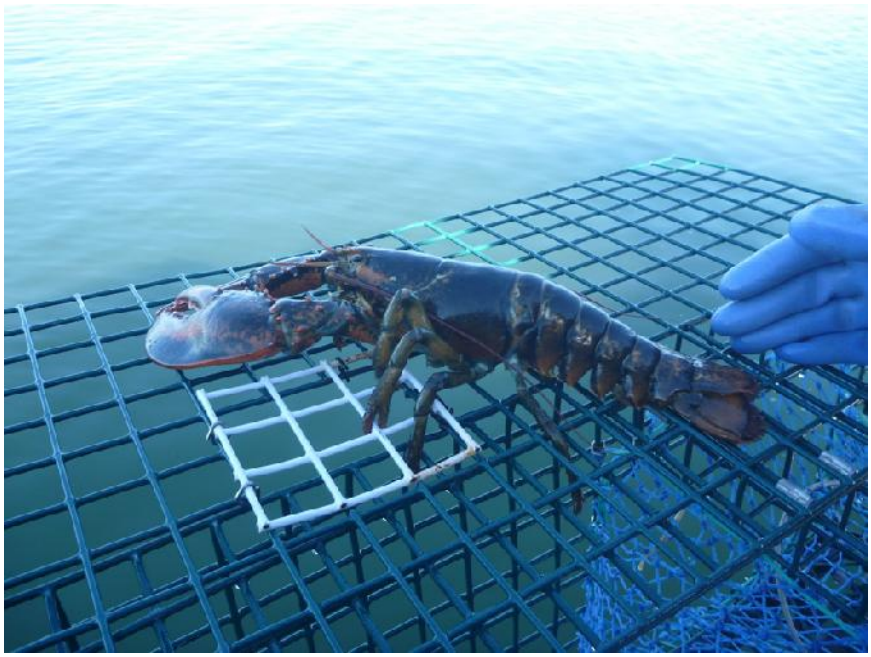
Client: United States District Court District of Maine
Location: Mendall Marsh
Project No.: 3616166052
Date: 9/29/2016
Photo No.: 25
Photographer: Kendra Bavor
Description: Tomcod fish caught in minnow trap.

Client: United States District Court District of Maine
Location: OB-05
Project No.: 3616166052
Date: 9/23/2016
Photo No.: 26
Photographer: Jonathan Bourdeau
Description: Bait sample OB-05-092316_BAIT_01 (Herring)

	Client: United States District Court District of Maine Location: N/A Project No.: 3616166052 Date: N/A Photo No.: 27 Photographer: (https://www.catfishconnection.com/Store/HOOPNET/HOOPNETS/HOOP-NETS-CATFISHTURTLE/HOOP-NETS-TRAPS/) Description: Examples of hoop nets.
	Client: United States District Court District of Maine Location: N/A Project No.: 3616166052 Date: N/A Photo No.: 28 Photographer: (http://www.fishing-tips-bait-tackle.com/minnow_trap.html) Description: Example of a minnow trap.

	Client: United States District Court District of Maine Location: N/A Project No.: 3616166052 Date: N/A Photo No.: 29 Photographer: (http://www.fishermansheadquarters.com/images/Equipment/Douglas/walking_a_seine_net.gif) Description: Diagram of a seine net.
	Client: United States District Court District of Maine Location: Onboard lobster boat in Penobscot River study area Project No.: 3616166052 Date: 9/26/2016 Photo No.: 30 Photographer: Jon Bourdeau Description: Empty lobster traps in boat.

	Client: United States District Court District of Maine Location: Onboard lobster boat in Penobscot River study area Project No.: 3616166052 Date: 9/24/2016 Photo No.: 31 Photographer: Jonathan Bourdeau Description: Lobsters and crabs in lobster trap.
	Client: United States District Court District of Maine Location: Onboard lobster boat in Penobscot River study area Project No.: 3616166052 Date: 9/26/2016 Photo No.: 32 Photographer: Jonathan Bourdeau Description: Lobsters in lobster trap.

	Client: United States District Court District of Maine Location: Onboard lobster boat in Penobscot River study area Project No.: 3616166052 Date: 9/26/2016 Photo No.: 33 Photographer: Jonathan Bourdeau Description: Representative lobster.
	Client: United States District Court District of Maine Location: Onboard lobster boat in Penobscot River study area Project No.: 3616166052 Date: 9/24/2016 Photo No.: 34 Photographer: Jonathan Bourdeau Description: Representative Lobster.

Client: United States District Court District of Maine
Location: Onboard lobster boat in Penobscot River study area
Project No.: 3616166052
Date: 9/24/2016
Photo No.: 35
Photographer: Jonathan Bourdeau
Description: Breeding female lobster with eggs

Client: United States District Court District of Maine
Location: Onboard lobster boat in Penobscot River study area
Project No.: 3616166052
Date: 9/22/2016
Photo No.: 36
Photographer: Jonathan Bourdeau
Description: Herring bait bag for lobster trap.

APPENDIX C
2016 Biota Data Summary Tables

Appendix C-1
2016 Terrestrial Insect Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury		Methyl Mercury		Lipids	
		Analytic Method:	EPA 1631		EPA 1630		NOAA Lipids 1993	
		Units:	ng/g		ng/g		%	
Location ID	**Sample Date**	**Sample ID**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
W17-Nb	7/19/2016	W17-N_071916_TIN_02_WB	25.5	J	118	J	3.4	
W17-Nb	7/19/2016	W17-N_071916_TIN_05_WB	29.2	J	28	J	3.9	
W17-Nb	7/19/2016	W17-N_071916_TIN_04_WB	30.4	J	21.7	J	2.8	
W17-Nb	7/19/2016	W17-N_071916_TIN_03_WB	50	J	56.7	J	3.4	
W17-Nb	7/19/2016	W17-N_071916_TIN_01_WB	254	J	64.2	J	0.99	
MMSE-1a	7/20/2016	MMSE-1_072016_TIN_01_WB	16.5	J	91.2	J	4.1	
MMSE-1a	7/20/2016	MMSE-1_072016_TIN_05_WB	56.3		6.9		3.5	
MMSE-1a	7/20/2016	MMSE-1_072016_TIN_04_WB	222		100		2.9	
MMSE-1a	7/20/2016	MMSE-1_072016_TIN_02_WB	327		68.3		3.1	
MMSE-1a	7/20/2016	MMSE-1_072016_TIN_03_WB	354		241		2.9	
MMSW-Cb	7/20/2016	MMSW-C_072016_TIN_02_WB	33.8		28.3		3.4	
MMSW-Cb	7/20/2016	MMSW-C_072016_TIN_04_WB	43.8		16.8		3.5	
MMSW-Cb	7/20/2016	MMSW-C_072016_TIN_03_WB	47.5		33.5		3.4	
MMSW-Cb	7/20/2016	MMSW-C_072016_TIN_05_WB	52.9		26.8		3.5	
MMSW-Cb	7/20/2016	MMSW-C_072016_TIN_06_WB	59.4		7.9		3.2	
ADD-01c	7/21/2016	ADD-01_072116_TIN_04_WB	7.37	J	12.7	J	3.4	
ADD-01c	7/21/2016	ADD-01_072116_TIN_05_WB	8.85	J	18.6	J	5.1	
ADD-01c	7/21/2016	ADD-01_072116_TIN_03_WB	16.8	J	31.2	J	3.3	
ADD-01c	7/21/2016	ADD-01_072116_TIN_02_WB	49.2		2.5	J	3.4	
ADD-01c	7/21/2016	ADD-01_072116_TIN_01_WB	63.2		24.9	J	3.5	

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
J = The detected concentration is considered estimated

Appendix C-2
2016 Spider Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury		Methyl Mercury		Lipids	
		Analytic Method:	EPA 1631		EPA 1630		NOAA Lipids 1993	
		Units:	ng/g		ng/g		%	
Location ID	**Sample Date**	**Sample ID**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
W17-Nb	7/24/2016	W17-N_072416_SPI_02_WB	197	J	278	J	2.6	
W17-Nb	7/24/2016	W17-N_072416_SPI_05_WB	213	J	642	J		
W17-Nb	7/25/2016	W17-N_072616_SPI_04_WB	263	J	480	J		
W17-Nb	7/25/2016	W17-N_072616_SPI_01_WB	431		210		2.1	
W17-Nb	7/25/2016	W17-N_072616_SPI_03_WB	420		282			
MMSE-1a	7/22/2016	MMSE-01_072216_SPI_01_WB	198		174		2.6	
MMSE-1a	7/25/2016	MMSE-1_072616_SPI_04_WB	200		136			
MMSE-1a	7/23/2016	MMSE-01_072316_SPI_03_WB	205		166		3.4	
MMSE-1a	7/22/2016	MMSE-01_072216_SPI_05_WB	208		181			
MMSE-1a	7/22/2016	MMSE-01_072216_SPI_02_WB	771		244		4.5	
MMSW-Cb	7/20/2016	MMSW-C_072016_SPI_01_WB	166	J	274	J		
MMSW-Cb	7/20/2016	MMSW-C_072016_SPI_02_WB	200		201		2.7	
MMSW-Cb	7/20/2016	MMSW-C_072016_SPI_05_WB	219		217			
MMSW-Cb	7/25/2016	MMSW-C_072616_SPI_03_WB	257	J	330	J	3	
MMSW-Cb	7/20/2016	MMSW-C_072016_SPI_04_WB	270		151			
ADD-01c	7/21/2016	ADD-01_072116_SPI_01_WB	25.9		14.6	J	1.1	
ADD-01c	7/21/2016	ADD-01_072116_SPI_05_WB	30.5		22.9	J	2.3	
ADD-01c	7/21/2016	ADD-01_072116_SPI_03_WB	31.4		22.9	J	1.6	
ADD-01c	7/21/2016	ADD-01_072116_SPI_02_WB	43.3		24	J	1.1	
ADD-01c	7/21/2016	ADD-01_072116_SPI_04_WB	44.2	J	60.2	J	2	

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
J = The detected concentration is considered estimated

Appendix C-3
2016 Nelson's Sparrow Blood Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury
		Analytic Method:	EPA 1631
		Units:	ng/g
Location ID	**Sample Date**	**Sample ID**	**Result**
W17-Nq	7/19/2016	W17-N_071916_NSS_04_BL	734
W17-Na	7/20/2016	W17-N_072016_NSS_09_BL	1560
W17-Nq	7/20/2016	W17-N_072016_NSS_07_BL	1630
W17-Nq	7/20/2016	W17-N_072016_NSS_14_BL	1960
W17-Nq	7/20/2016	W17-N_072016_NSS_06_BL	2140
W17-Nk	7/25/2016	W17-N_072516_NSS_16_BL	2920
W17-Nj	7/19/2016	W17-N_071916_NSS_08_BL	3990
W17-Nn	7/25/2016	W17-N_072516_NSS_15_BL	5000
W17-Nh	7/25/2016	W17-N_072516_NSS_10_BL	5240
W17-Nm	7/24/2016	W17-N_072416_NSS_12_BL	5350
W17-Np	7/19/2016	W17-N_071916_NSS_02_BL	6020
W17-Nq	7/19/2016	W17-N_071916_NSS_11_BL	6680
W17-Nq	7/19/2016	W17-N_071916_NSS_01_BL	7570
W17-Np	7/19/2016	W17-N_071916_NSS_03_BL	9590
W17-Ni	7/19/2016	W17-N_071916_NSS_05_BL	10300
MMSE-1c	7/25/2016	MMSE-1_072516_NSS_18_BL	4020
MMSE-1i	7/21/2016	MMSE-1_072116_NSS_04_BL	4130
MMSE-1b	7/21/2016	MMSE-1_072116_NSS_07_BL	4330
MMSE-1b	7/21/2016	MMSE-1_072116_NSS_06_BL	4590
MMSE-1b	7/23/2016	MMSE-1_072316_NSS_12_BL	4880
MMSE-1b	7/21/2016	MMSE-1_072116_NSS_08_BL	5730
MMSE-1i	7/21/2016	MMSE-1_072116_NSS_02_BL	5730
MMSE-1f	7/23/2016	MMSE-1_072316_NSS_13_BL	6130
MMSE-1j	7/23/2016	MMSE-1_072316_NSS_11_BL	6220
MMSE-1b	7/23/2016	MMSE-1_072316_NSS_15_BL	6380
MMSE-1i	7/21/2016	MMSE-1_072116_NSS_01_BL	7450
MMSE-1j	7/23/2016	MMSE-1_072316_NSS_16_BL	7520
MMSE-1d	7/25/2016	MMSE-1_072516_NSS_17_BL	8070
MMSE-1i	7/21/2016	MMSE-1_072116_NSS_05_BL	8450
MMSE-1h	7/21/2016	MMSE-1_072116_NSS_03_BL	9240
MMSW-Ca	7/24/2016	MMSW-C_072416_NSS_09_BL	3280
MMSW-Cd	7/19/2016	MMSW-C_071916_NSS_02_BL	4230
MMSW-Cc	7/20/2016	MMSW-C_072016_NSS_05_BL	5240
MMSW-Ca	7/24/2016	MMSW-C_072416_NSS_11_BL	5310
MMSW-Ca	7/23/2016	MMSW-C_072316_NSS_08_BL	5670
MMSW-Ca	7/23/2016	MMSW-C_072316_NSS_10_BL	5840
MMSW-Ce	7/19/2016	MMSW-C_071916_NSS_03_BL	5910
MMSW-Ca	7/20/2016	MMSW-C_072016_NSS_06_BL	6620
MMSW-Ca	7/20/2016	MMSW-C_072016_NSS_04_BL	6770
MMSW-Ca	7/20/2016	MMSW-C_072016_NSS_07_BL	7630
MMSW-Cc	7/19/2016	MMSW-C_071916_NSS_01_BL	7790
ADD-01a	7/25/2016	ADD-01_072516_NSS_06_BL	290
ADD-01d	7/25/2016	ADD-01_072616_NSS_09_BL	296
ADD-01g	7/22/2016	ADD-01_072216_NSS_03_BL	317
ADD-01g	7/22/2016	ADD-01_072216_NSS_05_BL	382
ADD-01i	7/25/2016	ADD-01_072616_NSS_08_BL	434
ADD-01f	7/25/2016	ADD-01_072616_NSS_10_BL	467
ADD-01i	7/25/2016	ADD-01_072616_NSS_11_BL	469
ADD-01e	7/22/2016	ADD-01_072216_NSS_04_BL	558
ADD-01h	7/21/2016	ADD-01_072116_NSS_02_BL	566
ADD-01a	7/25/2016	ADD-01_072516_NSS_07_BL	637
ADD-01j	7/21/2016	ADD-01_072116_NSS_01_BL	740

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied

Appendix C-4
2016 Red-winged Blackbird Blood Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury
		Analytic Method:	EPA 1631
		Units:	ng/g
Location ID	**Sample Date**	**Sample ID**	**Result**
W17-Nl	7/20/2016	W17-N_072016_RWB_02_BL	99.4
W17-Nl	7/20/2016	W17-N_072016_RWB_03_BL	2500
W17-No	7/19/2016	W17-N_071916_RWB_01_BL	5850

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied

Appendix C-5
2017 American Black Duck Blood Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury
		Analytic Method:	EPA 1631
		Units:	ng/g
Location ID	**Sample Date**	**Sample ID**	**Result**
MMBKD-01	1/22/2017	MMBKD-01_012217_ABD_02_BL	157
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_09_BL	242
MMBKD-01	1/22/2017	MMBKD-01_012217_ABD_01_BL	264
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_05_BL	284
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_13_BL	330
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_04_BL	379
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_10_BL	409
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_08_BL	504
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_11_BL	533
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_07_BL	558
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_14_BL	589
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_15_BL	628
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_12_BL	701
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_06_BL	961
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_03_BL	1400
ES-13	2/5/2017	ES-13_020517_ABD_07_BL	126
ES-13	2/5/2017	ES-13_020517_ABD_14_BL	198
ES-13	2/5/2017	ES-13_020517_ABD_09_BL	209
ES-13	1/24/2017	ES-13_012417_ABD_02_BL	310
ES-13	2/5/2017	ES-13_020517_ABD_08_BL	319
ES-13	1/24/2017	ES-13_012417_ABD_01_BL	331
ES-13	2/5/2017	ES-13_020517_ABD_10_BL	362
ES-13	2/5/2017	ES-13_020517_ABD_11_BL	377
ES-13	2/5/2017	ES-13_020517_ABD_06_BL	396
ES-13	2/5/2017	ES-13_020517_ABD_05_BL	403
ES-13	2/5/2017	ES-13_020517_ABD_15_BL	408
ES-13	2/5/2017	ES-13_020517_ABD_13_BL	472
ES-13	1/28/2017	ES-13_012817_ABD_03_BL	487
ES-13	2/5/2017	ES-13_020517_ABD_12_BL	596
ES-13	1/28/2017	ES-13_012817_ABD_04_BL	700
FRB-01	1/24/2017	FRB-01_012417_ABD_06_BL	11.3
FRB-01	1/24/2017	FRB-01_012417_ABD_03_BL	31.2
FRB-01	2/2/2017	FRB-01_020217_ABD_13_BL	31.5
FRB-01	2/2/2017	FRB-01_020217_ABD_15_BL	32.6
FRB-01	1/24/2017	FRB-01_012417_ABD_02_BL	35.5
FRB-01	2/2/2017	FRB-01_020217_ABD_12_BL	41.5
FRB-01	1/24/2017	FRB-01_012417_ABD_09_BL	43.3
FRB-01	1/24/2017	FRB-01_012417_ABD_01_BL	43.5
FRB-01	1/24/2017	FRB-01_012417_ABD_08_BL	53.1
FRB-01	1/24/2017	FRB-01_012417_ABD_07_BL	53.8
FRB-01	1/24/2017	FRB-01_012417_ABD_10_BL	69
FRB-01	1/24/2017	FRB-01_012417_ABD_05_BL	70.6
FRB-01	2/2/2017	FRB-01_020217_ABD_11_BL	83.9
FRB-01	2/2/2017	FRB-01_020217_ABD_14_BL	89.3
FRB-01	1/24/2017	FRB-01_012417_ABD_04_BL	109

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied

Appendix C-6
2017 American Black Duck Muscle Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury		Lipids	
		Analytic Method:	EPA 1631		NOAA Lipids 1993	
		Units:	ng/g		%	
Location ID	**Sample Date**	**Sample ID**	**Result**	**Qualifier**	**Result**	**Qualifier**
MMBKD-01	1/23/2017	MMBKD-01_012217_ABD_02_MU	121		2.5	
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_05_MU	170		1.6	
MMBKD-01	1/23/2017	MMBKD-01_012217_ABD_01_MU	177		2.9	
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_04_MU	325		2.6	
MMBKD-01	1/24/2017	MMBKD-01_012417_ABD_03_MU	854		1.1	
ES-13	1/24/2017	ES-13_012417_ABD_02_MU	243		2	
ES-13	1/28/2017	ES-13_012817_ABD_03_MU	371		2.1	
ES-13	2/5/2017	ES-13_020517_ABD_05_MU	441		2.1	
ES-13	1/28/2017	ES-13_012817_ABD_04_MU	507		2.7	
ES-13	1/24/2017	ES-13_012417_ABD_01_MU	717	J	1.9	
FRB-01	1/25/2017	FRB-01_012417_ABD_06_MU	10.1		2.3	
FRB-01	1/26/2017	FRB-01_012417_ABD_10_MU	41.7		1.5	
FRB-01	1/25/2017	FRB-01_012417_ABD_08_MU	44.8		1.7	
FRB-01	1/25/2017	FRB-01_012417_ABD_07_MU	46.5		1.6	
FRB-01	1/26/2017	FRB-01_012417_ABD_09_MU	47.6		2	

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by Date BPW 4/7/17

Data Qualifier Definitions:
J = The detected concentration is considered estimated

Appendix C-7
2016 Polychaete Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury		Methyl Mercury		Lipids	
		Analytic Method:	EPA 1631		EPA 1630		NOAA Lipids 1993	
		Units:	ng/g		ng/g		%	
Location ID	**Sample Date**	**Sample ID**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
BO-04b	7/26/2016	BO-04_072616_POL_01_WB	142	J	8.6	J		
BO-04b	7/26/2016	BO-04_072616_POL_02_WB	176	J	6.9	J		
BO-04b	7/26/2016	BO-04_072616_POL_03_WB	185	J	9.2	J		
BO-04b	7/26/2016	BO-04_072616_POL_05_WB	256	J	8.3	J		
BO-04b	7/26/2016	BO-04_072616_POL_04_WB	311	J	7.3	J		
OB-05k	7/26/2016	OB-05_072616_POL_04_WB	189	J	12.8	J		
OB-05k	7/26/2016	OB-05_072616_POL_03_WB	205	J	11	J		
OB-05k	7/26/2016	OB-05_072616_POL_01_WB	215	J	11.7	J		
OB-05k	7/26/2016	OB-05_072616_POL_02_WB	224	J	12.8	J		
OB-05k	7/26/2016	OB-05_072616_POL_05_WB	230	J	12.7	J		
MMPOLYa	7/29/2016	MMPOLY-01_072916_POL_01_WB	69.9	J	1.4	J		
MMPOLYa	7/29/2016	MMPOLY-01_072916_POL_04_WB	142	J	8.2	J		
MMPOLYa	7/29/2016	MMPOLY-01_072916_POL_03_WB	190	J	11.1	J		
MMPOLYa	7/29/2016	MMPOLY-01_072916_POL_05_WB	239	J	9.9	J		
MMPOLYa	7/29/2016	MMPOLY-01_072916_POL_02_WB	321	J	11.3	J		
ES-13h	7/27/2016	ES-13_072716_POL_03_WB	12.8		< 1.7	U	3.4	
ES-13h	7/27/2016	ES-13_072716_POL_01_WB	20.8		3.3		1.8	
ES-13h	7/27/2016	ES-13_072716_POL_04_WB	24.7		1.1	J	4.3	
ES-13h	7/27/2016	ES-13_072716_POL_02_WB	45.2		1.5	J	3.3	
ES-13h	7/27/2016	ES-13_072716_POL_05_WB	71.3		4.1			
ES-FPc	7/28/2016	ES-FP_072816_POL_04_WB	19.4	J	5.3	J	1.2	J
ES-FPc	7/28/2016	ES-FP_072816_POL_02_WB	24	J	4.4	J		
ES-FPc	7/28/2016	ES-FP_072816_POL_03_WB	24.5	J	< 1.6	UJ		
ES-FPc	7/28/2016	ES-FP_072816_POL_01_WB	34.6	J	6.2	J		
ES-FPc	7/28/2016	ES-FP_072816_POL_05_WB	46.1	J	15.7	J		
FRB-01a	9/28/2016	FRB-01_092816_POL_02_WB	< 0.661	U	< 1.7	U	1.5	
FRB-01a	9/28/2016	FRB-01_092816_POL_03_WB	< 0.668	U	< 1.9	U	1.4	
FRB-01a	9/28/2016	FRB-01_092816_POL_01_WB	< 0.691	U	< 1.7	U	2	
FRB-01a	9/28/2016	FRB-01_092816_POL_05_WB	< 0.739	U	< 1.8	U	1.4	
FRB-01a	9/28/2016	FRB-01_092816_POL_04_WB	3.18		< 2	U		

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
J = The detected concentration is considered estimated
U = The target parameter was not detected above the method detection limit
UJ = The target parameter was not detected, and the reporting limit is considered to be an estimate

Appendix C-8
2016 Blue Mussel Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
ES-15a	9/27/2016	ES-15_092716_BLM_13_WB	44.8	
ES-15a	9/27/2016	ES-15_092716_BLM_15_WB	45.6	
ES-15a	9/27/2016	ES-15_092716_BLM_01_WB	46.9	
ES-15a	9/27/2016	ES-15_092716_BLM_11_WB	48.1	
ES-15a	9/27/2016	ES-15_092716_BLM_16_WB	49.7	
ES-15a	9/27/2016	ES-15_092716_BLM_17_WB	49.8	
ES-15a	9/27/2016	ES-15_092716_BLM_20_WB	51.1	
ES-15a	9/27/2016	ES-15_092716_BLM_03_WB	55.3	
ES-15a	9/27/2016	ES-15_092716_BLM_12_WB	55.4	
ES-15a	9/27/2016	ES-15_092716_BLM_04_WB	55.5	
ES-15a	9/27/2016	ES-15_092716_BLM_09_WB	58.2	
ES-15a	9/27/2016	ES-15_092716_BLM_18_WB	62.7	
ES-15a	9/27/2016	ES-15_092716_BLM_19_WB	64.1	
ES-15a	9/27/2016	ES-15_092716_BLM_14_WB	64.8	
ES-15a	9/27/2016	ES-15_092716_BLM_06_WB	65	
ES-15a	9/27/2016	ES-15_092716_BLM_05_WB	65.6	
ES-15a	9/27/2016	ES-15_092716_BLM_08_WB	67.4	
ES-15a	9/27/2016	ES-15_092716_BLM_10_WB	68	
ES-15a	9/27/2016	ES-15_092716_BLM_02_WB	77	
ES-15a	9/27/2016	ES-15_092716_BLM_07_WB	96	
ES-13k	9/30/2016	ES-13_093016_BLM_07_WB	48.4	
ES-13k	9/30/2016	ES-13_093016_BLM_04_WB	48.9	
ES-13k	9/30/2016	ES-13_093016_BLM_16_WB	48.9	
ES-13k	9/30/2016	ES-13_093016_BLM_02_WB	53.9	
ES-13k	9/30/2016	ES-13_093016_BLM_08_WB	54.8	
ES-13k	9/30/2016	ES-13_093016_BLM_17_WB	56.5	
ES-13k	9/30/2016	ES-13_093016_BLM_18_WB	56.7	
ES-13k	9/30/2016	ES-13_093016_BLM_14_WB	58.5	
ES-13k	9/30/2016	ES-13_093016_BLM_11_WB	59.2	
ES-13k	9/30/2016	ES-13_093016_BLM_13_WB	59.6	
ES-13k	9/30/2016	ES-13_093016_BLM_20_WB	62.1	
ES-13k	9/30/2016	ES-13_093016_BLM_01_WB	63	
ES-13k	9/30/2016	ES-13_093016_BLM_10_WB	63.5	
ES-13k	9/30/2016	ES-13_093016_BLM_12_WB	66.4	
ES-13k	9/30/2016	ES-13_093016_BLM_15_WB	69	
ES-13k	9/30/2016	ES-13_093016_BLM_06_WB	70.8	
ES-13k	9/30/2016	ES-13_093016_BLM_09_WB	73.5	
ES-13k	9/30/2016	ES-13_093016_BLM_19_WB	75.2	
ES-13k	9/30/2016	ES-13_093016_BLM_05_WB	76.9	
ES-13k	9/30/2016	ES-13_093016_BLM_03_WB	106	
ES-03a	9/27/2016	ES-03_092716_BLM_14_WB	51	
ES-03a	9/27/2016	ES-03_092716_BLM_02_WB	57.8	2.4
ES-03a	9/27/2016	ES-03_092716_BLM_03_WB	60.4	1.5
ES-03a	9/27/2016	ES-03_092716_BLM_11_WB	61.1	
ES-03a	9/27/2016	ES-03_092716_BLM_20_WB	68.6	
ES-03a	9/27/2016	ES-03_092716_BLM_08_WB	69	0.64
ES-03a	9/27/2016	ES-03_092716_BLM_10_WB	71	1.6
ES-03a	9/27/2016	ES-03_092716_BLM_07_WB	71.4	2.7
ES-03a	9/27/2016	ES-03_092716_BLM_17_WB	76	
ES-03a	9/27/2016	ES-03_092716_BLM_12_WB	77.3	
ES-03a	9/27/2016	ES-03_092716_BLM_04_WB	77.7	2.3
ES-03a	9/27/2016	ES-03_092716_BLM_01_WB	80.4	
ES-03a	9/27/2016	ES-03_092716_BLM_13_WB	81.4	
ES-03a	9/27/2016	ES-03_092716_BLM_05_WB	81.9	2.1
ES-03a	9/27/2016	ES-03_092716_BLM_19_WB	87.5	
ES-03a	9/27/2016	ES-03_092716_BLM_18_WB	88.9	
ES-03a	9/27/2016	ES-03_092716_BLM_09_WB	107	1.4
ES-03a	9/27/2016	ES-03_092716_BLM_15_WB	116	
ES-03a	9/27/2016	ES-03_092716_BLM_06_WB	118	1.5
ES-03a	9/27/2016	ES-03_092716_BLM_16_WB	138	
ES-FPd	9/26/2016	ES-FP_092616_BLM_05_WB	40	

Appendix C-8
2016 Blue Mussel Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
ES-FPd	9/26/2016	ES-FP_092616_BLM_13_WB	41.3	
ES-FPd	9/26/2016	ES-FP_092616_BLM_07_WB	45.2	
ES-FPd	9/26/2016	ES-FP_092616_BLM_15_WB	45.4	
ES-FPd	9/26/2016	ES-FP_092616_BLM_03_WB	48.5	
ES-FPd	9/26/2016	ES-FP_092616_BLM_14_WB	52	
ES-FPd	9/26/2016	ES-FP_092616_BLM_01_WB	55.4	
ES-FPd	9/26/2016	ES-FP_092616_BLM_19_WB	55.7	
ES-FPd	9/26/2016	ES-FP_092616_BLM_06_WB	55.8	
ES-FPd	9/26/2016	ES-FP_092616_BLM_20_WB	58.6	
ES-FPd	9/26/2016	ES-FP_092616_BLM_16_WB	59.1	
ES-FPd	9/26/2016	ES-FP_092616_BLM_04_WB	62.4	
ES-FPd	9/26/2016	ES-FP_092616_BLM_17_WB	63.7	
ES-FPd	9/26/2016	ES-FP_092616_BLM_18_WB	64.3	
ES-FPd	9/26/2016	ES-FP_092616_BLM_12_WB	73.4	
ES-FPd	9/26/2016	ES-FP_092616_BLM_10_WB	74.1	
ES-FPd	9/26/2016	ES-FP_092616_BLM_11_WB	79.3	
ES-FPd	9/26/2016	ES-FP_092616_BLM_08_WB	80.4	
ES-FPd	9/26/2016	ES-FP_092616_BLM_02_WB	86	
ES-FPd	9/26/2016	ES-FP_092616_BLM_09_WB	111	

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied

Appendix C-9
2016 Lobster Tail Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
L10-52b	9/24/2016	L10-52_092416_LOB_18_TA	142	0.56
L10-52a	9/24/2016	L10-52_092416_LOB_03_TA	149	0.29
L10-52a	9/24/2016	L10-52_092416_LOB_02_TA	152	0.48
L10-52c	9/24/2016	L10-52_092416_LOB_07_TA	158	0.47
L10-52a	9/24/2016	L10-52_092416_LOB_05_TA	159	1.4
L10-52c	9/24/2016	L10-52_092416_LOB_11_TA	161	0.7
L10-52a	9/24/2016	L10-52_092416_LOB_01_TA	169	0.41
L10-52c	9/24/2016	L10-52_092416_LOB_06_TA	185	0.84
L10-52b	9/24/2016	L10-52_092416_LOB_17_TA	200	0.53
L10-52b	9/24/2016	L10-52_092416_LOB_16_TA	201	0.33
L10-52b	9/24/2016	L10-52_092416_LOB_19_TA	212	0.61
L10-52b	9/24/2016	L10-52_092416_LOB_13_TA	254	0.91
L10-52c	9/24/2016	L10-52_092416_LOB_10_TA	263	0.73
L10-52c	9/24/2016	L10-52_092416_LOB_08_TA	364	1.4
L10-52c	9/24/2016	L10-52_092416_LOB_09_TA	365	0.51
L10-52b	9/24/2016	L10-52_092416_LOB_15_TA	418	1
L10-52b	9/24/2016	L10-52_092416_LOB_14_TA	438	0.68
L10-52a	9/24/2016	L10-52_092416_LOB_04_TA	527	0.5
L10-52c	9/24/2016	L10-52_092416_LOB_12_TA	772	0.66
L10-52b	9/24/2016	L10-52_092416_LOB_20_TA	786	0.57
SVE-01b	9/24/2016	SVE-01_092416_LOB_10_TA	167	0.62
SVE-01a	9/24/2016	SVE-01_092416_LOB_07_TA	181	0.51
SVE-01a	9/24/2016	SVE-01_092416_LOB_04_TA	222	0.73
SVE-01b	9/24/2016	SVE-01_092416_LOB_12_TA	227	0.64
SVE-01a	9/24/2016	SVE-01_092416_LOB_02_TA	265	0.47
SVE-01b	9/24/2016	SVE-01_092416_LOB_13_TA	272	0.45
SVE-01a	9/24/2016	SVE-01_092416_LOB_03_TA	277	0.47
SVE-01a	9/24/2016	SVE-01_092416_LOB_08_TA	278	0.64
SVE-01d	9/24/2016	SVE-01_092416_LOB_17_TA	308	0.51
SVE-01a	9/24/2016	SVE-01_092416_LOB_01_TA	344	0.47
SVE-01b	9/24/2016	SVE-01_092416_LOB_14_TA	388	0.64
SVE-01d	9/24/2016	SVE-01_092416_LOB_18_TA	395	0.49
SVE-01b	9/24/2016	SVE-01_092416_LOB_11_TA	450	0.57
SVE-01c	9/24/2016	SVE-01_092416_LOB_16_TA	459	0.52
SVE-01a	9/24/2016	SVE-01_092416_LOB_05_TA	512	0.59
SVE-01a	9/24/2016	SVE-01_092416_LOB_09_TA	512	0.52
SVE-01a	9/24/2016	SVE-01_092416_LOB_06_TA	523	0.28
SVE-01b	9/24/2016	SVE-01_092416_LOB_15_TA	674	0.39
SVE-01d	9/24/2016	SVE-01_092416_LOB_19_TA	747	0.41
SVE-01d	9/24/2016	SVE-01_092416_LOB_20_TA	1320	0.66
CPJLa	9/24/2016	CPJL-092416_LOB_04_TA	98.8	0.66
CPJLc	9/24/2016	CPJL-092416_LOB_13_TA	136	0.95
CPJLa	9/24/2016	CPJL-092416_LOB_07_TA	140	0.9
CPJLa	9/24/2016	CPJL-092416_LOB_01_TA	142	0.88
CPJLa	9/24/2016	CPJL-092416_LOB_09_TA	147	0.86
CPJLb	9/24/2016	CPJL-092416_LOB_18_TA	150	0.88
CPJLa	9/24/2016	CPJL-092416_LOB_05_TA	155	0.63
CPJLc	9/24/2016	CPJL-092416_LOB_11_TA	159	0.91
CPJLc	9/24/2016	CPJL-092416_LOB_10_TA	166	0.82
CPJLa	9/24/2016	CPJL-092416_LOB_08_TA	179	0.89
CPJLb	9/24/2016	CPJL-092416_LOB_17_TA	180	0.83
CPJLa	9/24/2016	CPJL-092416_LOB_03_TA	183	0.73
CPJLa	9/24/2016	CPJL-092416_LOB_02_TA	186	1
CPJLc	9/24/2016	CPJL-092416_LOB_12_TA	207	0.98
CPJLb	9/24/2016	CPJL-092416_LOB_19_TA	222	0.96
CPJLb	9/24/2016	CPJL-092416_LOB_16_TA	255	0.84
CPJLb	9/24/2016	CPJL-092416_LOB_14_TA	259	0.81
CPJLa	9/24/2016	CPJL-092416_LOB_06_TA	289	0.77
CPJLb	9/24/2016	CPJL-092416_LOB_15_TA	337	0.65
CPJLb	9/24/2016	CPJL-092416_LOB_20_TA	391	0.99
L9-45c	9/24/2016	L9-45_092416_LOB_10_TA	74	0.7
L9-45c	9/24/2016	L9-45_092416_LOB_04_TA	101	1.1
L9-45c	9/24/2016	L9-45_092416_LOB_01_TA	108	0.65
L9-45b	9/24/2016	L9-45_092416_LOB_15_TA	129	0.83
L9-45b	9/24/2016	L9-45_092416_LOB_16_TA	150	0.98
L9-45c	9/24/2016	L9-45_092416_LOB_05_TA	152	0.57
L9-45b	9/24/2016	L9-45_092416_LOB_14_TA	155	1.1
L9-45c	9/24/2016	L9-45_092416_LOB_09_TA	155	0.52
L9-45b	9/24/2016	L9-45_092416_LOB_13_TA	157	0.73

Appendix C-9
2016 Lobster Tail Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
L9-45c	9/24/2016	L9-45_092416_LOB_07_TA	162	1
L9-45b	9/24/2016	L9-45_092416_LOB_18_TA	166	0.7
L9-45b	9/24/2016	L9-45_092416_LOB_12_TA	171	0.78
L9-45b	9/24/2016	L9-45_092416_LOB_19_TA	173	0.75
L9-45c	9/24/2016	L9-45_092416_LOB_02_TA	191	0.58
L9-45c	9/24/2016	L9-45_092416_LOB_06_TA	194	0.99
L9-45a	9/24/2016	L9-45_092416_LOB_20_TA	195	0.77
L9-45b	9/24/2016	L9-45_092416_LOB_17_TA	218	0.66
L9-45c	9/24/2016	L9-45_092416_LOB_11_TA	219	0.77
L9-45c	9/24/2016	L9-45_092416_LOB_08_TA	242	0.7
L9-45c	9/24/2016	L9-45_092416_LOB_03_TA	254	0.62
HB-01e	9/26/2016	HBI-01_092616_LOB_09_TA	44.4	0.73
HB-01h	9/24/2016	HBI-01_092416_LOB_03_TA	46.9	0.83
HB-01g	9/26/2016	HBI-01_092616_LOB_16_TA	54	0.94
HB-01f	9/24/2016	HBI-01_092416_LOB_04_TA	68.7	1
HB-01h	9/24/2016	HBI-01_092416_LOB_02_TA	76.9	0.91
HB-01a	9/24/2016	HBI-01_092416_LOB_08_TA	82.9	0.99
HB-01d	9/24/2016	HBI-01_092416_LOB_06_TA	92.7	1
HB-01c	9/26/2016	HBI-01_092616_LOB_12_TA	96.7	0.76
HB-01e	9/26/2016	HBI-01_092616_LOB_13_TA	98.4	1.1
HB-01f	9/24/2016	HBI-01_092416_LOB_05_TA	100	0.94
HB-01b	9/24/2016	HBI-01_092416_LOB_07_TA	103	0.81
HB-01a	9/26/2016	HBI-01_092616_LOB_20_TA	107	1.2
HB-01a	9/26/2016	HBI-01_092616_LOB_18_TA	108	0.6
HB-01h	9/26/2016	HBI-01_092616_LOB_10_TA	117	0.64
HB-01g	9/26/2016	HBI-01_092616_LOB_15_TA	119	0.93
HB-01a	9/26/2016	HBI-01_092616_LOB_19_TA	122	0.95
HB-01f	9/26/2016	HBI-01_092616_LOB_17_TA	127	0.97
HB-01g	9/26/2016	HBI-01_092616_LOB_14_TA	128	0.85
HB-01f	9/26/2016	HBI-01_092616_LOB_11_TA	129	1
HB-01h	9/24/2016	HBI-01_092416_LOB_01_TA	139	0.72

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied

Appendix C-10
2016 Mummichog Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
BO-04c	10/3/2016	BO-04_100316_MUM_10_WB	52.4	3.4
BO-04c	10/3/2016	BO-04_100316_MUM_13_WB	55	3.2
BO-04c	10/3/2016	BO-04_100316_MUM_02_WB	57.7	3.5
BO-04c	10/3/2016	BO-04_100316_MUM_15_WB	58.1	3.4
BO-04c	10/3/2016	BO-04_100316_MUM_19_WB	59.3	2.9
BO-04c	10/3/2016	BO-04_100316_MUM_09_WB	60.6	2.9
BO-04c	10/3/2016	BO-04_100316_MUM_16_WB	61.7	3.4
BO-04c	10/3/2016	BO-04_100316_MUM_20_WB	63.9	4.4
BO-04c	10/3/2016	BO-04_100316_MUM_14_WB	66.7	4.6
BO-04c	10/3/2016	BO-04_100316_MUM_04_WB	67.3	4
BO-04c	10/3/2016	BO-04_100316_MUM_08_WB	75	3.5
BO-04c	10/3/2016	BO-04_100316_MUM_06_WB	76	3
BO-04c	10/3/2016	BO-04_100316_MUM_07_WB	76	3.2
BO-04c	10/3/2016	BO-04_100316_MUM_18_WB	85.9	2.9
BO-04c	10/3/2016	BO-04_100316_MUM_11_WB	94.3	2.2
BO-04c	10/3/2016	BO-04_100316_MUM_17_WB	108	3.5
BO-04c	10/3/2016	BO-04_100316_MUM_03_WB	146	3.2
BO-04c	10/3/2016	BO-04_100316_MUM_12_WB	200	4.1
BO-04c	10/3/2016	BO-04_100316_MUM_05_WB	214	2.6
BO-04c	10/3/2016	BO-04_100316_MUM_01_WB	234	3.6
OB-05r	10/3/2016	OB-05_100316_MUM_15_WB	48.9	2.6
OB-05r	10/3/2016	OB-05_100316_MUM_18_WB	66.2	3.4
OB-05r	10/3/2016	OB-05_100316_MUM_12_WB	69.4	3.6
OB-05r	10/3/2016	OB-05_100316_MUM_14_WB	71.3	4.1
OB-05r	10/3/2016	OB-05_100316_MUM_17_WB	71.6	4.4
OB-05r	9/25/2016	OB-05_092516_MUM_04_WB	82.1	2.5
OB-05r	10/3/2016	OB-05_100316_MUM_08_WB	83.2	2.6
OB-05r	10/3/2016	OB-05_100316_MUM_09_WB	83.4	3.6
OB-05r	10/3/2016	OB-05_100316_MUM_20_WB	87.6	2.5
OB-05r	10/3/2016	OB-05_100316_MUM_11_WB	88.2	2.2
OB-05r	10/3/2016	OB-05_100316_MUM_16_WB	89.9	3
OB-05r	10/3/2016	OB-05_100316_MUM_10_WB	92.6	3.8
OB-05r	10/3/2016	OB-05_100316_MUM_19_WB	95.8	3.9
OB-05r	9/25/2016	OB-05_092516_MUM_05_WB	96.1	3.8
OB-05r	10/3/2016	OB-05_100316_MUM_13_WB	98.5	3.4
OB-05r	10/3/2016	OB-05_100316_MUM_07_WB	106	3.2
OB-05r	9/25/2016	OB-05_092516_MUM_01_WB	111	3.5
OB-05r	9/25/2016	OB-05_092516_MUM_03_WB	113	3.1
OB-05r	9/25/2016	OB-05_092516_MUM_06_WB	114	2.6
OB-05r	9/25/2016	OB-05_092516_MUM_02_WB	125	3.7
OB-01c	9/25/2016	OB-01_092516_MUM_01_WB	134	4.5
MMMC-01b	9/23/2016	MMMC-01_092316_MUM_04_WB	121	4.2
MMMC-01b	9/23/2016	MMMC-01_092316_MUM_03_WB	140	4.6
MMMC-01a	9/23/2016	MMMC-01_092316_MUM_01_WB	177	5.6
MMMC-01a	9/23/2016	MMMC-01_092316_MUM_02_WB	249	3.5
FRB-01b	9/28/2016	FRB-01_092816_MUM_19_WB	4.94	4.4
FRB-01b	9/28/2016	FRB-01_092816_MUM_04_WB	5.16	4.3
FRB-01b	9/28/2016	FRB-01_092816_MUM_08_WB	5.76	3.6
FRB-01b	9/28/2016	FRB-01_092816_MUM_01_WB	6.49	4.1
FRB-01b	9/28/2016	FRB-01_092816_MUM_03_WB	6.77	4.4
FRB-01b	9/28/2016	FRB-01_092816_MUM_05_WB	6.9	5.7
FRB-01b	9/28/2016	FRB-01_092816_MUM_09_WB	7.05	4.5
FRB-01b	9/28/2016	FRB-01_092816_MUM_12_WB	7.67	5.2
FRB-01b	9/28/2016	FRB-01_092816_MUM_06_WB	7.83	4.5
FRB-01b	9/28/2016	FRB-01_092816_MUM_14_WB	7.9	4.8
FRB-01b	9/28/2016	FRB-01_092816_MUM_16_WB	8.01	4.8
FRB-01b	9/28/2016	FRB-01_092816_MUM_15_WB	8.19	4.6
FRB-01b	9/28/2016	FRB-01_092816_MUM_10_WB	8.37	5.5
FRB-01b	9/28/2016	FRB-01_092816_MUM_20_WB	8.43	4.2
FRB-01b	9/28/2016	FRB-01_092816_MUM_17_WB	8.58	4.8
FRB-01b	9/28/2016	FRB-01_092816_MUM_07_WB	9.29	5.3

Appendix C-10
2016 Mummichog Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
FRB-01b	9/28/2016	FRB-01_092816_MUM_13_WB	9.38	4.8
FRB-01b	9/28/2016	FRB-01_092816_MUM_02_WB	9.83	4.3
FRB-01b	9/28/2016	FRB-01_092816_MUM_18_WB	11.1	4.3
FRB-01b	9/28/2016	FRB-01_092816_MUM_11_WB	13.5	5.2

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied

Appendix C-11
2016 Rainbow Smelt Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
OB-05c	9/21/2016	OB-05_092116_RAS_01_WB	201	3.7
OB-04	9/21/2016	OB-01_092116_RAS_01_WB	44.5	3.3
OB-04	9/21/2016	OB-01_092116_RAS_04_WB	47.5	1.1
OB-04	9/21/2016	OB-01_092116_RAS_02_WB	54.9	8.2
OB-04	9/21/2016	OB-01_092116_RAS_03_WB	55.6	6
OB-04	9/21/2016	OB-01_092116_RAS_05_WB	81.9	10
OB-01e	9/21/2016	OB-01_092116_RAS_14_WB	31.8	2.3
OB-01e	9/21/2016	OB-01_092116_RAS_15_WB	33.6	6.1
OB-01e	9/21/2016	OB-01_092116_RAS_18_WB	44.2	4.2
OB-01e	9/21/2016	OB-01_092116_RAS_19_WB	58.2	3.7
OB-01r	9/21/2016	OB-01_092116_RAS_08_WB	75.3	3.4
OB-01e	9/21/2016	OB-01_092116_RAS_13_WB	79.5	5.3
OB-01e	9/21/2016	OB-01_092116_RAS_20_WB	82.8	3.1
OB-01e	9/21/2016	OB-01_092116_RAS_09_WB	90.8	4
OB-01e	9/21/2016	OB-01_092116_RAS_10_WB	94.6	4.2
OB-01e	9/21/2016	OB-01_092116_RAS_11_WB	95.4	5.2
OB-01e	9/21/2016	OB-01_092116_RAS_16_WB	102	9.8
OB-01e	9/21/2016	OB-01_092116_RAS_17_WB	103	2.7
OB-01e	9/21/2016	OB-01_092116_RAS_12_WB	116	3.9
OB-01r	9/21/2016	OB-01_092116_RAS_07_WB	140	4.5
OB-01r	9/21/2016	OB-01_092116_RAS_06_WB	146	4.8
ES-15	9/21/2016	ES-13_092116_RAS_01_WB	38.4	8
ES-FPb	9/27/2016	ES-FP_092716_RAS_18_WB	27.1	4.3
ES-FPb	9/27/2016	ES-FP_092716_RAS_14_WB	31.4	4.4
ES-FPb	9/27/2016	ES-FP_092716_RAS_19_WB	33.4	2.9
ES-FPb	9/27/2016	ES-FP_092716_RAS_10_WB	35.4	7.7
ES-FPb	9/27/2016	ES-FP_092716_RAS_07_WB	36.2	5.5
ES-FPb	9/27/2016	ES-FP_092716_RAS_20_WB	39.8	3.7
ES-FPb	9/27/2016	ES-FP_092716_RAS_17_WB	44.4	4.2
ES-FPb	9/27/2016	ES-FP_092716_RAS_06_WB	48.7	4
ES-FPb	9/27/2016	ES-FP_092716_RAS_03_WB	49.3	7.9
ES-FPb	9/27/2016	ES-FP_092716_RAS_12_WB	54.7	5.5
ES-FPb	9/27/2016	ES-FP_092716_RAS_13_WB	56	5.3
ES-FPb	9/27/2016	ES-FP_092716_RAS_05_WB	60.5	7.1
ES-FPb	9/27/2016	ES-FP_092716_RAS_16_WB	60.7	5.3
ES-FPb	9/27/2016	ES-FP_092716_RAS_15_WB	64	5.2
ES-FPb	9/27/2016	ES-FP_092716_RAS_11_WB	74.1	4
ES-FPb	9/27/2016	ES-FP_092716_RAS_09_WB	78.4	9
ES-FPb	9/27/2016	ES-FP_092716_RAS_04_WB	84.6	9.3
ES-FPb	9/27/2016	ES-FP_092716_RAS_01_WB	93.6	8
ES-FPb	9/27/2016	ES-FP_092716_RAS_08_WB	108	3.8
ES-FPb	9/27/2016	ES-FP_092716_RAS_02_WB	113	9.5
FRB-01d	9/28/2016	FRB-01_092816_RAS_07_WB	5.07	4
FRB-01d	9/28/2016	FRB-01_092816_RAS_01_WB	5.46	3.7
FRB-01d	9/28/2016	FRB-01_092816_RAS_17_WB	5.72	4.1
FRB-01d	9/28/2016	FRB-01_092816_RAS_02_WB	5.96	3.2
FRB-01d	9/28/2016	FRB-01_092816_RAS_16_WB	6.19	3.7
FRB-01d	9/28/2016	FRB-01_092816_RAS_04_WB	6.37	2.8
FRB-01d	9/28/2016	FRB-01_092816_RAS_11_WB	6.46	2.4
FRB-01d	9/28/2016	FRB-01_092816_RAS_05_WB	6.5	3.9
FRB-01d	9/28/2016	FRB-01_092816_RAS_20_WB	6.52	3.8
FRB-01d	9/28/2016	FRB-01_092816_RAS_12_WB	6.6	3.5
FRB-01d	9/28/2016	FRB-01_092816_RAS_14_WB	6.67	4.3
FRB-01d	9/28/2016	FRB-01_092816_RAS_13_WB	6.79	3
FRB-01d	9/28/2016	FRB-01_092816_RAS_10_WB	6.89	4.5
FRB-01d	9/28/2016	FRB-01_092816_RAS_09_WB	7.03	4.4
FRB-01d	9/28/2016	FRB-01_092816_RAS_03_WB	7.27	3.2
FRB-01d	9/28/2016	FRB-01_092816_RAS_19_WB	7.35	2.5
FRB-01d	9/28/2016	FRB-01_092816_RAS_06_WB	7.62	4.3
FRB-01d	9/28/2016	FRB-01_092816_RAS_08_WB	8	3.9
FRB-01d	9/28/2016	FRB-01_092816_RAS_18_WB	8.26	4.4
FRB-01d	9/28/2016	FRB-01_092816_RAS_15_WB	8.37	4.7

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied

Appendix C-12
2016 Eel Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury		Lipids	
		Analytic Method:	EPA 1631		NOAA Lipids 1993	
		Units:	ng/g		%	
Location ID	**Sample Date**	**Sample ID**	**Result**	**Qualifier**	**Result**	**Qualifier**
BO-04d	8/5/2016	BO-04_080516_EEL_01_WB	1370	J	7.3	
OB-05s	8/3/2016	OB-05_080316_EEL_01_WB	391		2.9	
OB-05i	8/5/2016	OB-05_080516_EEL_05_WB	428		1.6	
OB-05n	8/3/2016	OB-05_080316_EEL_04_WB	461		1.2	
OB-05v	8/3/2016	OB-05_080316_EEL_03_WB	485		1.8	
OB-05l	8/3/2016	OB-05_080316_EEL_02_WB	579		17	
OB-01a	8/2/2016	OB-01_080216_EEL_01_WB	394		2.3	

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
J = The detected concentration is considered estimated

Appendix C-13
2016 Atlantic Tomcod Analytical Results

2016 Biota Monitoring Report
Penobscot River

		Parameter Name:	Mercury	Lipids
		Analytic Method:	EPA 1631	NOAA Lipids 1993
		Units:	ng/g	%
Location ID	**Sample Date**	**Sample ID**	**Result**	**Result**
BO-04a	9/25/2016	BO-04_092516_TOM_03_WB	195	0.17
BO-04a	9/25/2016	BO-04_092516_TOM_01_WB	304	0.15
BO-04a	9/25/2016	BO-04_092516_TOM_04_WB	312	0.18
BO-04a	9/25/2016	BO-04_092516_TOM_02_WB	315	0.27
OB-05g	9/25/2016	OB-05_092516_TOM_03_WB	80.6	0.42
OB-05d	9/25/2016	OB-05_092516_TOM_13_WB	105	0.29
OB-05f	9/25/2016	OB-05_092516_TOM_02_WB	105	0.1
OB-05h	9/25/2016	OB-05_092516_TOM_05_WB	109	0.11
OB-05t	9/25/2016	OB-05_092516_TOM_11_WB	117	0.24
OB-05t	9/25/2016	OB-05_092516_TOM_10_WB	135	0.26
OB-05g	9/25/2016	OB-05_092516_TOM_04_WB	142	0.12
OB-05o	9/25/2016	OB-05_092516_TOM_08_WB	146	0.16
OB-05a	9/25/2016	OB-05_092516_TOM_16_WB	149	0.35
OB-05b	9/25/2016	OB-05_092516_TOM_06_WB	154	0.15
OB-05e	9/25/2016	OB-05_092516_TOM_01_WB	158	0.18
OB-05q	9/25/2016	OB-05_092516_TOM_18_WB	161	0.18
OB-05u	9/25/2016	OB-05_092516_TOM_07_WB	194	0.17
OB-05m	9/25/2016	OB-05_092516_TOM_14_WB	201	0.22
OB-05m	9/25/2016	OB-05_092516_TOM_15_WB	213	0.26
OB-05p	9/25/2016	OB-05_092516_TOM_09_WB	246	0.13
OB-05j	9/25/2016	OB-05_092516_TOM_12_WB	253	0.11
OB-05a	9/25/2016	OB-05_092516_TOM_17_WB	275	0.26
OB-01d	9/24/2016	OB-01_092416_TOM_05_WB	69	0.46
OB-01d	9/24/2016	OB-01_092416_TOM_07_WB	76	0.29
OB-01d	9/24/2016	OB-01_092416_TOM_10_WB	82.1	0.32
OB-01d	9/24/2016	OB-01_092416_TOM_11_WB	89.5	0.6
OB-01d	9/24/2016	OB-01_092416_TOM_12_WB	89.5	0.35
OB-01d	9/24/2016	OB-01_092416_TOM_01_WB	115	0.26
OB-01d	9/24/2016	OB-01_092416_TOM_17_WB	155	0.19
OB-01d	9/24/2016	OB-01_092416_TOM_06_WB	159	0.32
OB-01d	9/24/2016	OB-01_092416_TOM_04_WB	170	0.34
OB-01d	9/24/2016	OB-01_092416_TOM_08_WB	174	0.34
OB-01d	9/24/2016	OB-01_092416_TOM_13_WB	179	0.22
OB-01d	9/24/2016	OB-01_092416_TOM_16_WB	188	0.34
OB-01d	9/24/2016	OB-01_092416_TOM_09_WB	196	0.48
OB-01d	9/24/2016	OB-01_092416_TOM_18_WB	212	0.37
OB-01d	9/24/2016	OB-01_092416_TOM_02_WB	215	0.33
OB-01d	9/24/2016	OB-01_092416_TOM_03_WB	232	0.4
OB-01d	9/24/2016	OB-01_092416_TOM_19_WB	245	0.42
OB-01d	9/24/2016	OB-01_092416_TOM_15_WB	276	0.28
OB-01d	9/24/2016	OB-01_092416_TOM_14_WB	280	0.18
ES-13e	9/30/2016	ES-13_093016_TOM_11_WB	56.5	0.36
ES-13g	9/27/2016	ES-13_092716_TOM_01_WB	59.2	0.61
ES-13b	9/27/2016	ES-13_092716_TOM_03_WB	65	0.14
ES-13l	9/27/2016	ES-13_092716_TOM_02_WB	76.1	0.27
ES-13i	9/27/2016	ES-13_092716_TOM_05_WB	80.4	0.11
ES-13a	9/30/2016	ES-13_093016_TOM_09_WB	103	0.34
ES-13e	9/30/2016	ES-13_093016_TOM_10_WB	113	0.17
ES-13f	9/29/2016	ES-13_092916_TOM_07_WB	129	0.13
ES-13c	9/29/2016	ES-13_092916_TOM_06_WB	142	0.19
ES-13d	9/27/2016	ES-13_092716_TOM_04_WB	164	0.29
ES-13a	9/29/2016	ES-13_092916_TOM_08_WB	211	0.38
ES-FPe	9/27/2016	ES-FP_092716_TOM_01_WB	55.5	0.35
ES-FPa	10/1/2016	ES-FP_100116_TOM_02_WB	74.3	0.48
FRB-01c	9/29/2016	FRB-01_092916_TOM_01_WB	36.5	0.36

Notes:
ng/g = nanograms per gram

Prepared by/Date: RMB 4/7/17
Checked by/Date: BPW 4/7/17

Data Qualifier Definitions:
A data quality evaluation was performed on the data, no qualifiers were applied