

AR #797



NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

25 Nashua Road
Bedford, NH 03110-5500
(603) 472-5191
(603) 472-7052 (Fax)
www.normandeau.com



12 January 2009

Mr. Glen Normandeau
Executive Director
NH Fish and Game Department
11 Hazen Drive
Concord, NH 03301-6500

RECEIVED
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DIRECTOR'S OFFICE

Dear Mr. Normandeau,

In accordance with the requirements issued with scientific license # F2008-29, the following letter report details the 2008 fish capture allowed under this permit. Fish capture for this permit is separated into three different tasks including (1) the capture of juvenile river herring in the Suncook River and Merrimack River as part of a fish passage study relating to the operations at Garvins Falls Dam (PSNH) in Bow, NH, (2) the sampling of fish from Garvins, Hooksett, and Amoskeag Pools in the Merrimack River as part of a study related to the operations of the Merrimack Station Generating Facility in Bow, NH, and (3) the capture of American eel in the tailwater of Hooksett Hydroelectric Facility for siting the location of upstream passage for that species.

Task 1. Juvenile river herring collected for fish passage study at Garvins Falls.

Collection of juvenile herring for the Garvins Falls Clupeid bypass study took place between October 15 through 17, 2008. All fish were captured using cast nets. Sampling locations and catch by species for that effort is listed below.

- Cass Pond Dam, Epsom - 52 alewives
- China Mills Hydro Facility, Suncook - 174 alewives
- Total Count - 226 alewives

The majority of captured herring were released as part of the Garvins Falls Bypass Study during the fall of 2008. Any herring not utilized were released at Garvins Falls into the Merrimack River following the completion of the study.

Task 2. Merrimack Station white sucker and yellow perch stock assessment

A total of 1,537 individuals representing 23 species were captured within Garvins, Hooksett, and Amoskeag Pools during sampling in 2008. Table 1 presents the fisheries data from this study broken down by species and pool. Sampling effort consisted of boat electrofishing and trap net sampling during both the spring (May) and fall (September).

Lewes, DE	Bedford, NH, Corporate	Haverstraw, NY	Aiken, SC	Wenatchee, WA
Falmouth, ME	Hampton, NH	Drumore, PA	Stevenson, WA	Verona, WI
Falmouth, MA	Westmoreland, NH	Stowe, PA	Vancouver, WA	

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Table 1: Fish species and number of individuals captured in three sections of the Merrimack River in 2008.

Common name	Number of Individuals			
	Hooksett Pool	Garvin's Pool	Amoskeag Pool	Total
Alewife	16	0	0	16
American eel	8	0	0	8
American shad	4	0	12	16
Black crappie	5	3	0	8
Bluegill	60	24	3	87
Brook trout	2	0	1	3
Brown bullhead	0	16	0	16
Chain pickerel	18	22	3	43
Common carp	1	0	4	5
Common shiner	0	1	1	2
Emerald shiner	1	0	0	1
Fallfish	92	1	5	98
Golden shiner	11	0	14	25
Largemouth bass	215	31	5	251
Margined madtom	0	1	0	1
Pumpkinseed	8	26	3	37
Redbreast sunfish	26	16	7	49
Rock bass	10	7	3	20
Smallmouth bass	120	20	48	188
Spottail shiner	82	6	2	90
Tessellated darter	2	0	0	2
White sucker	221	28	20	269
Yellow perch	77	216	9	302
All	979	418	140	1,537



Task 3. American eel capture below Hooksett Hydroelectric Facility

A total of 3 American eels was captured below the Hooksett Hydroelectric Facility in commercial eel pots during early July 2008. This study was discontinued during late July 2008 due to high flows.

If there are any questions regarding the information presented here, please contact me at 603.472.5191 (x171).

Sincerely,

Normandeau Associates, Inc.

Drew Trested
Fisheries Biologist



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Mr. Glen Normandeau
Executive Director
NH Fish and Game Department
11 Hazen Drive
Concord, NH 03301-6500

Dear Mr. Normandeau,

In accordance with the requirements issued with scientific license # F2008-42, the following letter report details the 2008 fish capture allowed under this permit. Under this permit, permission was granted to sample fish in Nineteen Mile Brook in Tuftonboro, NH to establish baseline conditions in mid-August 2008.

All fish were captured by back-pack electro-fishing and were identified to species, measured, weighed, and released alive at the site of capture. Species composition and total catch are presented below.

Fisheries sampling at Nineteen Mile Brook during August 2008

Common name	Count
brook trout	31
chain pickerel	4
golden shiner	3
white sucker	1
Total	39

If there are any questions regarding the information presented here, please contact me at 603.472.5191 (x171).

Sincerely,

Normandeau Associates, Inc.

Drew Trested
Fisheries Biologist

Lewes, DE
Falmouth, ME
Falmouth, MA

Bedford, NH, Corporate
Hampton, NH
Westmoreland, NH

Haverstraw, NY
Drumore, PA
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New Hampshire Fish and Game Department

11 Hazen Drive, Concord, NH 03301-6500
Headquarters: (603) 271-3421
Web site: www.WildNH.com

TDD Access: Relay NH 1-800-735-2964
FAX (603) 271-1438
E-mail: info@wildlife.nh.gov

Glenn Normandeau
Executive Director

SCIENTIFIC LICENSE #F2008-29

Amended July 3, 2008 (ccis added)

To Whom It May Concern:

Under the authority contained in RSA 214:29, permission is hereby granted to **Don Mason, Senior Aquatic Ecologist, Normandeau Associates, Inc., 25 Nashua Road, Bedford, NH 03110-5500, Tel. 603-472-5191**, to sample fish in the Amoskeag Pool, Hooksett Pool, and Garvin's Falls Pool sections of Merrimack River as part of a study related to the operations of the Merrimack Station Generating Facility in Bow, NH.

Time of collection: April - November 2008.

Collection sites: Amoskeag, Hooksett and Garvins Pools of the Merrimack River.

Target species: Yellow perch, white sucker, American eel.

Method of collection: Boat electrofishing, trap nets, gill nets, trot lines, eel pots. Gill nets will be checked periodically during the daytime and not be left overnight. No gill netting will occur from April 1 - June 15 in order to prevent entrapment of outmigrating Atlantic salmon smolts.

Final disposition of specimens collected: All fish will be returned to the water unharmed, except for a sub-sample of fish will be retained for the purpose of gathering biological information including length, weight, age, gender, sexual conditions, fecundity, and incidence of parasitism.

Subpermittees: Normandeau Associates Biologists: Corey Francis, Mike Jeanneau, Rick Simmons, Drew Trested, Sean Stimmell, Sean Maxwell, Ethan Sobo

This permit, or a copy, shall be carried with the permittees while engaged in any activity allowed under this permit and shall be displayed to any New Hampshire Fish and Game Department Conservation Officer or employee upon request.

This permit shall expire December 31, 2008, unless sooner revoked or rescinded.

A report of findings shall be submitted to the Executive Director by January 31, 2009.


Glenn Normandeau
Executive Director

GN/srd

cc: Law Enforcement ✓
Inland Fisheries ✓



New Hampshire Fish and Game Department

11 Hazen Drive, Concord, NH 03301-6500
Headquarters: (603) 271-3421
Web site: www.WildNH.com

TDD Access: Relay NH 1-800-735-2964
FAX (603) 271-1438
E-mail: info@wildlife.nh.gov

Glenn Normandeau
Executive Director

SCIENTIFIC LICENSE #F2008-29

April 7, 2008

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Time of collection: April - November 2008.

Collection sites: Amoskeag, Hooksett and Garvins Pools of the Merrimack River.

Target species: Yellow perch, white sucker.

Method of collection: Boat electrofishing, trap nets, gill nets, trot lines. Gill nets will be checked periodically during the daytime and not be left overnight. No gill netting will occur from April 1 - June 15 in order to prevent entrapment of outmigrating Atlantic salmon smolts.

Final disposition of specimens collected: All fish will be returned to the water unharmed, except for a sub-sample of fish will be retained for the purpose of gathering biological information including length, weight, age, gender, sexual conditions, fecundity, and incidence of parasitism.

Subpermittees: Normandeau Associates Biologists: Corey Francis, Mike Jeanneau, Rick Simmons, Drew Trested, Sean Stimmell, Sean Maxwell, Ethan Sobo

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Glenn Normandeau
Executive Director

GN/srd
cc: Law Enforcement
Inland Fisheries ✓



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MAR 14 2008

INLAND FISHERIES

11 March 2008
Mr. Scott Decker
New Hampshire Fish and Game Department
11 Hazen Drive
Concord, NH 03301-6500

Dear Mr. Decker:

Normandeau Associates, Inc. is requesting a scientific collecting permit to collect yellow perch and white sucker from the Merrimack River for two studies we will be conducting for Public Service of New Hampshire's Merrimack Station this coming field season.

One study would examine and compare reproductive status, fecundity, age, and growth of yellow perch and white sucker in Garvin's, Hooksett, and Amoskeag Pools. Yellow perch and white sucker will be captured and examined during two seasons in 2008 (spring and late summer/ fall), and a targeted subsample of fish will be retained for the purpose of gathering biological information including length, weight, age, gender, sexual conditions, fecundity, and incidence of disease or parasitism.

A second study is designed to measure the density of white sucker larvae in Hooksett Pool from May through mid-July.

Permit information

Sampling Schedule: April through November 2008

Collection Location: Amoskeag Pool, Hooksett Pool, Garvins Pool on the Merrimack River

Target Species: Yellow perch (*Perca flavescens*) and white sucker (*Catostomus commersoni*)

Methods: Boat electrofishing, trap nets, gill nets, trot lines

Permittee: Don Mason, Senior Aquatic Ecologist
Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110-5527

Date: 04/07/2008 INVOICE 73894
 122148
 Scientific Permit
 Total: 25.00
 Tendered: 25.00
 Check: 25.00

Bedford, NH, Corporate

Norfolk, CT
Lewes, DE
Yarmouth, ME

Hanover, MA
Hampton, NH
Westmoreland, NH

West Haverstraw, NY
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NORMANDEAU ASSOCIATES, INC.

Subpermittees: Corey Francis, Mike Jeanneau, Drew Trested, Sean Stimmell, Sean Maxwell,
Rick Simmons, Ethan Sobo

If you have any questions or require additional information please call or email Rick Simmons
(rsimmons@normandeau.com) or me (dmason@normandeau.com) at (603) 472-5191 anytime. Thank
you.

Sincerely,
NORMANDEAU ASSOCIATES, INC.

Donald P. Mason
Senior Aquatic Ecologist



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APR - 2 2008
INLAND FISHERIES

2 April 2008
Mr. Scott Decker
New Hampshire Fish and Game Department
11 Hazen Drive
Concord, NH 03301-6500

Dear Mr. Decker:

On 11 March 2008 I sent you a letter requesting a scientific collecting permit to collect yellow perch and American eel from the Merrimack River for growth and fecundity studies we will be conducting this year. Unfortunately I neglected to include the \$25 fee for processing the permit application. Enclosed please find a \$25 check to cover this application fee.

If you have any questions or require additional information please call or email Rick Simmons (rsimmons@normandeau.com) or me (dmason@normandeau.com) at (603) 472-5191 anytime. Thank you.

Sincerely,
NORMANDEAU ASSOCIATES, INC.

Donald P. Mason
Senior Aquatic Ecologist

Bedford, NH, Corporate

Norfolk, CT
Lewes, DE
Yarmouth, ME

Hanover, MA
Hampton, NH
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