



THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



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Bent

CHRISTOPHER D. CLEMENT, SR.
COMMISSIONER

JEFF BRILLHART, P.E.
ASSISTANT COMMISSIONER

Bureau of Environment
August 14, 2014

Her Excellency, Governor Margaret Wood Hassan
and the Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the Department of Transportation (DOT), Bureau of Environment, to pay the Department of Environmental Services (DES) (Vendor #177894) Aquatic Resource Mitigation (ARM) Fund \$351,895.87 for impacts to the Piscataqua River, North Mill Pond, associated tidal wetlands and tidal buffer zones, and an isolated fresh water wetland, effective upon Governor and Council approval, through June 30, 2015. 100% Federal Funds.

Funding is as follows:

FY 2015

04-96-96-963515-3054

Consolidated Federal Aid

400-500870 Highway Contract Payments

\$351,895.87

EXPLANATION

Pursuant to RSA 482-A, to compensate for the loss of jurisdictional areas, DES adopted rules that require mitigation for major impact projects, certain minor impact projects with jurisdictional impacts of 10,000 square feet or greater, and projects involving linear impacts to stream channels and their banks (Env-Wt 303.02, and Env-Wt Part 900). The ARM Fund authorizes DES to collect mitigation funds in lieu of wetland restoration, wetland creation, or upland buffer preservation, as part of a wetlands permit application. These funds are then pooled by DES with payments from other permit applications to fund projects that have greater conservation value within the same watershed. The ARM program was authorized in legislation that became effective in August 2006.

This project (Portsmouth-Kittery, 15731), which involves the construction of a new two-level (road and rail) US Route 1 bypass bridge spanning the Piscataqua River between Portsmouth, NH and Kittery, ME, requires a one-time payment in Fiscal Year 2015 of \$351,895.87 as mitigation for 42,096 square feet of permanent jurisdictional stream, bank, tidal buffer zone, estuarine and palustrine wetland impacts, as well as temporary impacts to Essential Fish Habitat, as documented in the attached technical memorandum, mitigation matrix, and e-mail confirmation from DES. This mitigation amount addresses impacts associated with the construction of the bridge on the New Hampshire side of the Piscataqua River, and includes \$86,000.00 for impacts to Essential Fish Habitat (EFH) across the entire river. This \$86,000.00 payment is shared by both New Hampshire and Maine in accordance with the National Marine Fisheries Service (NMFS) evaluation of needs. Based on NMFS' evaluation, Maine's share is \$43,000.00 and New Hampshire's share is \$43,000.00. The State of Maine will reimburse the State of New Hampshire for their share of the EFH mitigation.

Marc Laurin

From: Sommer, Lori <Lori.Sommer@des.nh.gov>
Sent: Tuesday, August 05, 2014 12:47 PM
To: Marc Laurin
Subject: FW: ILF for Sarah Mildred Long bridge

Hi Marc,

The ARM Fund payment amount that you noted in your memo, \$351,895.87 is the correct amount and that can proceed forward to G&C. Thanks,

Lori Sommer
DES Wetland Mitigation Coordinator
Wetlands Bureau
(603) 271-4059
Lori.Sommer@des.nh.gov

ATTENTION: In order to ensure that all permit applications have the required elements for technical review, please be certain to use the newest versions of our application forms dated in the footnote as "valid until 7/1/2013". Going forward, the Land Resources Management Programs plan to update applications every 6 months. The next round of updates will occur on June 1, 2013. Please refer to our website at <http://des.nh.gov/organization/divisions/water/lrm/summary.htm> for the current application forms.

Technical Memorandum - Regarding In-Lieu Fee Calculations for the Sarah Mildred Long Bridge Replacement – NHDES File # 2014-01053

This memorandum documents the calculation of the proposed in-lieu fee to be paid to the NHDES Aquatic Resource Mitigation (ARM) Fund for the construction of the Sarah Mildred Long Bridge.

As a major impact project that proposes to permanently impact a total of 46,174 square feet of tidal wetland and tidal buffer in New Hampshire, the project requires permittee-responsible mitigation under Administrative Rules Env-Wt 803.01. NHDOT proposes to mitigate for these impacts through restoration of previously impacted tidal wetlands and via an in-lieu fee. 11,810 square feet of tidal wetlands will be restored to their prior condition following the removal of piers and footings of the existing bridge, removal of a concrete boat ramp, and removal of a portion of the north barge wharf at the NH Port Authority facility.

Under Env-Wt 803.05, Compensatory Mitigation Ratios, DES requires a 2:1 ratio for restoration of tidal wetlands for mitigation. Since 11,810 square feet of wetlands will be restored, a mitigation credit of 5,905 square feet has been assumed. Table 1 details the areas where restoration will occur. Restoration areas are depicted on the “Wetland Impact Plans of Proposed Bridge Replacement Bridge No. 251 / 108 Us Route 1 Bypass over the Piscataqua River Between Portsmouth, NH, and Kittery, ME, Federal Project No. A000(909), NH Project No. 15731” attached to this memorandum.

Table 1 Tidal Wetland Restoration Summary

Location	Sheet	Class	Wetland Number	Mitigation Credit	Description
<i>N</i>	<i>1</i>	<i>E2US3</i>	<i>3</i>	<i>208</i>	Pier 1 removal
<i>O</i>	<i>1</i>	<i>E2US3</i>	<i>3</i>	<i>243</i>	Pier 2 removal
<i>P</i>	<i>1</i>	<i>E1UB3</i>	<i>6</i>	<i>243</i>	Pier 6 removal
<i>HH</i>	<i>2</i>	<i>E1UB3/ E2US3</i>	<i>6/7</i>	<i>12,644</i>	Barge wharf removal
<i>BB</i>	<i>2</i>	<i>E1UB3/ E2US1</i>	<i>6/7</i>	<i>-1,700</i>	Proposed boat ramp (within barge wharf removal area)
<i>CC</i>	<i>2</i>	<i>E2US1</i>	<i>7</i>	<i>-1,500</i>	Proposed railroad bridge abutment (within barge wharf removal area)
<i>QQ</i>	<i>2</i>	<i>E1UB3</i>	<i>6</i>	<i>720</i>	Pier 15 removal
<i>EEE</i>	<i>2</i>	<i>E2US1</i>	<i>7</i>	<i>952</i>	Boat ramp removal
				11,810	Tidal wetlands restored
				5,905	Mitigation Credit for Tidal Wetlands Restored (2:1 mitigation ratio)

"All Other Areas" In-lieu Fee

The "all other areas" portion of the in-lieu fee is based on permanent impacts to tidal buffers plus permanent impact to the freshwater wetland next to the Albacore Connector (JJ on Wetland Plan 01). All of the tidal buffer is "developed". Temporary vs. permanent impacts to tidal buffers were based on whether the impacts were temporary construction impacts or permanent impacts that would result in a change in topography and/or cover type (such as the railroad approach). Using this rationale, there is a total of **21,577 sf** of permanent impact to tidal buffer, and **1,480 sf** of permanent impact to freshwater wetland. The "all other areas" mitigation obligation is **21,577 sf + 1,480 sf = 23,057 sf**. Using the DES Aquatic Resource Mitigation Fund Calculator for "all other areas", the in-lieu fee payment = **\$100,282.34**.

Tidal Wetland In-lieu Fee

The project proposes a total of **24,944** square feet of permanent impact to tidal wetlands. From this, the restoration credit from Table 1 was subtracted: **24,944 - 5,905 = 19,039 sf**. Using the DES Aquatic Resource Mitigation Fund Calculator, 19,039 sf of impact to tidal wetlands would require an in-lieu fee payment = **\$165,613.53**.

Essential Fish Habitat Mitigation Fee

The National Marine Fisheries Service (NMFS) has negotiated with Maine FHWA on a proposed additional in-lieu fee payment to the NH ARM fund for the temporary impacts incurred by the construction causeway. As temporary impacts, no mitigation is required under NH law or rules. An additional payment to the NH ARM fund of **\$86,000** will be requested by NMFS.

Proposed in-lieu payments are summarized in Table 2, below.

Table 2 In-lieu Fee Summary

	"ALL OTHER AREAS"	TIDAL WETLAND	TOTAL
Permanent TBZ impacts (SF)	21,577		21,577
Permanent Freshwater Wetland Impacts (SF)	1,480		1,480
Permanent Tidal Wetland Impacts (SF)		24,944	24,944
Restoration Credit (SF)		-5905	-5,905
Total Mitigation Obligation (SF)	23,057	19,039	42,096
Total In-lieu Fee (See Exhibit 6)	\$100,282.34	\$165,613.53	\$265,895.87
Essential Fish Habitat Mitigation			\$86,000
			\$351,895.87

<p style="text-align: center;">SARAH MILDRED LONG BRIDGE REVISED DES AQUATIC RESOURCE MITIGATION FUND WETLAND PAYMENT CALCULATION for PERMANENT IMPACTS TO TIDAL WETLAND BUFFERS AND FRESHWATER WETLANDS</p>			
1 Convert square feet of impact to acres:			
INSERT SQ FT OF IMPACT	Square feet of impact	23057.00	
		43560.00	
	Acres of impact =	0.5293	
2 Determine acreage of wetland construction:			
	Forested wetlands:		
	Tidal wetlands:		
	All other areas:	0.7940	
3 Wetland construction cost:			
	Forested wetlands:		
	Tidal Wetlands:		
	All other areas:	\$64,485.86	
4 Land acquisition cost (See land value table):			
INSERT LAND VALUE FROM TABLE WHICH APPEARS TO THE LEFT	Town land value:	\$33,603	
	Forested wetlands:		
	Tidal wetlands:		
	All other areas:	\$26,679.90	
5 Construction + land costs:			
	Forested wetland:		
	Tidal wetlands:		
	All other areas:	\$91,165.77	
6 DES Administrative cost:			
	Forested wetlands:		
	Tidal wetlands:		
	All other areas:	\$9,116.58	
***** TOTAL ARM PAYMENT*****			
	Forested wetlands:		
	Tidal wetlands:		
	All other areas:	\$100,282.34	

**SARAH MILDRED LONG BRIDGE
REVISED
DES AQUATIC RESOURCE MITIGATION FUND
WETLAND PAYMENT CALCULATION for
PERMANENT IMPACTS TO TIDAL WETLANDS**

1 Convert square feet of impact to acres:			
INSERT SQ FT OF IMPACT	Square feet of impact	19039.00	Note: reflects 5,905 sf credit for 11,810 tidal wetland restoration.
		43560.00	
	Acres of impact =	0.4371	
2 Determine acreage of wetland construction:			
	Forested wetlands:		
	Tidal wetlands:	1.3112	
	All other areas:		
3 Wetland construction cost:			
	Forested wetlands:		
	Tidal Wetlands:	\$106,496.63	
	All other areas:		
4 Land acquisition cost (See land value table):			
INSERT LAND VALUE FROM TABLE WHICH APPEARS TO THE LEFT	Town land value:	\$33,603	
	Forested wetlands:		
	Tidal wetlands:	\$44,061.12	
	All other areas:		
5 Construction + land costs:			
	Forested wetland:		
	Tidal wetlands:	\$150,557.75	
	All other areas:		
6 DES Administrative cost:			
	Forested wetlands:		
	Tidal wetlands:	\$15,055.78	
	All other areas:		
***** TOTAL ARM PAYMENT *****			
	Forested wetlands:		
	Tidal wetlands:	\$165,613.53	
	All other areas:		