2013 Annual Report of the Massachusetts In-Lieu Fee Program

February 2014

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1. INTRODUCTION

In 2008, the U.S. Army Corps of Engineers (Corps), the Massachusetts Department of Fish and Game (DFG) and the Massachusetts Division of Marine Fisheries (DMF) entered into a Memorandum of Understanding (MOU) authorizing DMF as the program administrator for the Massachusetts In-lieu Fee (ILF) Program. This compensatory mitigation program addresses authorized impacts to aquatic resources and aquatic habitats of managed diadromous fish and marine finfish and shellfish species in Massachusetts' waters, resulting from projects permitted under the Massachusetts General Permit (GP). DMF operates this program under the direction of a Steering Committee consisting of representatives from the Corps, Massachusetts Office of Coastal Zone Management (CZM), Massachusetts Department of Environmental Protection (DEP), United States Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS) and DFG. The program was developed in consultation with the Steering Committee to provide an alternative to permittee-responsible compensatory mitigation under the GP in order to achieve the goal of "no net loss" to aquatic habitat area, functions and values. Program participants provide fee payments in-lieu of on-site mitigation to the Commonwealth of Massachusetts' Marine Mammals and Fisheries Research and Conservation Trust (Trust). This is an expendable trust account established by the Commonwealth pursuant to M.G.L. c. 6A, s.6 and 801 CMR 50.00 and is administered by DMF.

Effective June 9, 2013, the MOU between the Corps and DMF establishing the MA ILF program expired. This annual report represents the final record of In-lieu fees collected under the MOU. DMF continues to administer the ILF funds deposited into the Trust and will provide programmatic updates to the Corps through annual reports documenting progress of projects funded through the program. The Department of Fish and Game (DFG) is currently in the process of seeking the Corps approval to become the program sponsor of an expanded statewide ILF program.

2. IMPACTS AND FEES RECEIVED

As outlined in Section IV (J) of the MOU, DMF is required to report to the Corps the location and amount of aquatic habitat impacts as well as information on the functions lost through permitted impacts on a calendar year basis. This annual report must contain information on aquatic resource impacts from permitted projects that deposit payments into the Trust to complete their mitigation requirements, including a summary of deposits by year, projects funded, and impacts mitigated using ILF funds. All program information tracked since program initiation (2008) is included in this report.

Twenty-seven (27) projects impacting 18,980.40 ft² of aquatic habitats contributed \$229,117.00 to the program. <u>Table 1</u> provides a breakdown of authorized impacts (ft²) by service area, habitat type, and year of payment. <u>Table 2</u> provides a summary of all In-lieu fees deposited into the Trust since program inception (2008). Service area, impacted habitat type, Watershed, Corps permit ID number, date of receipt of payment, area of impact (ft²), and deposit amount by year are included. <u>Table 3</u> includes all programmatic financial inputs and outputs for the ILF Program from 2008 -2013.

Administrative overhead

Section VII of the MOU authorizes DMF to receive compensation from in-lieu fees deposited in the Trust for costs associated with development, implementation, monitoring, and oversight of mitigation projects. The compensation is deemed to represent and reimburse reasonable overhead and related administrative costs of administrating the fund to accomplish the mitigation projects. On September 20, 2012, the Steering Committee agreed to a recommendation to set the administrative fee at 12% of all accrued fees.

Table 1. Authorized impacts (ft²) by habitat type

Service Area	Habitat			Total (ft ²)			
		2009	2010	2011	2012	2013	
Central	Mud flat	16.00	32.00		81.00	26.00	155.00
	Open water					20.00	20.00
	Salt marsh		125.00			88.00	213.00
Central Total		16.00	157.00		81.00	134.00	388.00
North	Mud flat	2.00	200.00	1,250.00	55.00		1,507.00
	Open water	785.25	1,273.00	624.00	1,100.00		3,782.25
	SAV					364.75	364.75
North Total		787.25	1,473.00	1,874.00	1,155.00	364.75	5,654.00
South	Mud flat	300.00			150.00		450.00
	Open water			8,410.00	1,583.50	2,052.00	12,045.50
	SAV			425.50		17.40	442.90
South Total		300.00		8,835.50	1,733.50	2,069.40	12,938.40
Grand Total		1,103.25	1,630.00	10,709.50	2,969.50	2,568.15	18,980.40

Table 2. ILF Deposit Summary

Service	Habitat	Town/Watershed	Permit Number	Payment	Area of			Grand Total				
Area	Habitat			Rcvd Date	Impact (sq ft)	2008	2009	2010	2011	2012	2013	Grand Total
Central	Mud flat	Duxbury	2008-3219	1/29/2010	20		\$400.00					\$400.00
			2008-3220	4/20/2010	12		\$240.00					\$240.00
			2008-3485	9/22/2011	20		\$400.00					\$400.00
			2008-3490	5/11/2009	16		\$160.00					\$160.00
			2011-00670	7/13/2011	26				\$520.00			\$520.00
		Plymouth	2004-00364	10/22/2012	61					\$1,220.00		\$1,220.00
	Open water	Duxbury	2012-02680	1/28/2013	20						\$200.00	\$200.00
	Salt marsh	Duxbury	2008-3220	4/20/2010	125		\$2,500.00					\$2,500.00
		•	2011-00670	7/13/2011	88				\$1,760.00			\$1,760.00
Central T	otal	•	8.				\$3,700.00		\$2,280.00	\$1,220.00	\$200.00	\$7,400.00
North	Mud flat	Rockport	2009-709	4/6/2010	200		\$4,000.00					\$4,000.00
		Salem	2007-2786	11/9/2009	2		\$150.00					\$150.00
		Saugus	1984-00335	1/24/2012	55					\$1,100.00		\$1,100.00
		Somerville	2009-2702	11/14/2011	1250			\$25,000.00				\$25,000.00
	Open water	Beverly	2010-1995	1/6/2011	80			\$800.00				\$800.00
		Chelsea	2011-00807	3/20/2012	1100					\$11,000.00		\$11,000.00
		Danvers, Crane River	2009-2418	1/31/2011	544				\$5,400.00			\$5,400.00
		Newburyport	2009-1427	10/26/2009	35		\$352.50					\$352.50
		Salem	2008-3223	5/12/2010	1273		\$12,730.00					\$12,730.00
		Weymouth, Fore River	2008-2574	1/6/2009	750	\$7,500.00						\$7,500.00
	SAV	Marblehead	2013-00126	6/3/2013	365				\$10,942.50			\$10,942.50
North To	tal					\$7,500.00	\$17,232.50	\$25,800.00	\$16,342.50	\$12,100.00		\$78,975.00
South	Mud flat	Dartmouth	2012-00764	7/23/2012	150					\$3,000.00		\$3,000.00
		Harwich	2007-2548	5/20/2009	300		\$6,000.00					\$6,000.00
	Open water	Dartmouth	2012-00764	7/24/2012	968					\$9,675.00		\$9,675.00
		Fairhaven	2009-2273	1/31/2011	459		\$4,590.00					\$4,590.00
		New Bedford	2005-2900	5/26/2011	7951				\$79,510.00			\$79,510.00
		Somerset	2007-3044	11/22/2011	2052						\$20,520.00	\$20,520.00
		Yarmouth	2009-399	3/9/2012	616		\$6,160.00					\$6,160.00
	SAV	Marion	2010-02451	3/18/2011	426				\$12,765.00			\$12,765.00
			2012-02581	1/11/2013	11						\$330.00	\$330.00
		Mattapoisett	2010-01158	4/19/2013	6						\$192.00	\$192.00
South To	tal		_	_			\$16,750.00		\$92,275.00	\$12,675.00	\$21,042.00	\$142,742.00
Grand To	tal					\$7,500.00	\$37,682.50	\$25,800.00	\$110,897.50	\$25,995.00	\$21,242.00	\$229,117.00

Table 3. Financial Accounting

		Total Income	Payment Amount	Ru	unning Account Balance
ILF Funds Received (2008 -2013) \$ 229,1:				\$	229,117.00
Administrative Fee (1		\$ 27,494.04	\$	201,622.96	
Funded Projects:					
1. Off Bil	lington St. Dam removal		\$ 128,202.00	\$	(73,420.96)
2. Rough meadows			\$ 14,704.00	\$	(58,716.96)
3. Great	Marsh		\$ 23,800.00	\$	(34,916.96)
4. Draka	Dam (partial funding)		\$ 34,916.96	\$	(0.00)
Total for Funded Projects			\$ 201,622.96	\$	(201,622.96)

3. ILF AWARDS AND PROJECT SUMMARIES

Section 10 (2) of the MOU requires DMF to provide information on projects receiving Trust funds as part of the annual report. The annual report must include project descriptions and specific information on the start date, completion date, mitigation type, location, performance standards, status of monitoring, costs, and financial assurances for all projects.

ILF funds were expended on projects selected through a Request for Proposals (RFP) process initiated in September of 2012. The RFP received seven proposals that were reviewed and ranked by a panel comprised of restoration professionals and Steering Committee representatives. The project ranking followed criteria developed by DMF through a grant from the MassBays program (more information on the project ranking criteria can be found at:

http://www.mass.gov/eea/docs/dfg/dmf/programsandprojects/mbp-final-report-dec-2012.pdf). The project selection committee selected the top three ranked projects for final approval by the Corps. A fourth eligible project was selected for partial funding. A summary of rankings is included in Table 4. The selected projects are described below.

Project 1. Off Billington Street Dam Removal Project – Plymouth

The Town of Plymouth was awarded \$128,202.00 to facilitate the removal of the Off Billington Street Dam. The structure will be replaced with an arch bridge. In order to improve water quality, contaminated sediment from behind the dam will be removed. The project is expected to provide unimpeded fish passage for alewife, blueback herring, and American eel and is part of a larger comprehensive approach to restoring the historic anadromous fish run at Town Brook, eventually re-establishing river herring access to 269 acres of spawning habitat once all phases of the project are completed. The project will open an additional 400 linear feet of stream habitat at a total estimated cost of almost \$1.5 million dollars. Funds from the ILFP will be used to vegetate the exposed stream banks once the dam is removed and the impoundment behind the dam is drained.

The Off Billington Street Dam was removed in November 2013. Stream bank vegetation work using ILF funds is expected to take place in the spring of 2014.

Project 2. Rough Meadows - Rowley

The Massachusetts Audubon Society was awarded \$14,704.00 to fund a project that will contribute to the restoration of salt marsh and immediately adjacent brackish marsh at Rough Meadows Wildlife Sanctuary in Rowley, Massachusetts. ILF funds will be used over a three-year period for treatments necessary to accomplish the eradication or near eradication of targeted common reed (*Phragmites*) stands. Successful implementation will result in the restoration of approximately 5.5 acres of marsh habitat and reduce the likelihood of the spread of common reed to additional areas. Elimination of the targeted common reed colonies will improve marsh ecosystem health and reduce the spread of common reed as the result of disturbance associated with climate change and coastal alterations throughout the region. In addition, the control of common reed should facilitate the migration of salt marsh as sea level rises as predicted by climate change models.

According to an October 2013 project status report submitted by the applicant, the Rough Meadows Sanctuary was explored on foot to locate and map all common reed stands present in May 2013. Twenty-seven stands, ranging in size from 0.01 to 2.91 acres, were located and mapped. The total mapped area of common reed was 15.05 acres, exceeding the 5.5-acre estimate of the area of common reed present indicated in the ILF Program grant application. The applicant estimates that approximately 9 acres of salt marsh habitat at Rough Meadows Wildlife Sanctuary will be restored with the funds provided by the In-Lieu Fee Mitigation Program.

All stands will be revisited in spring 2014 to obtain a preliminary assessment of the success of the 2013 herbicide treatment. Photo monitoring of all stands will occur in late summer 2014. Vegetation monitoring quadrats will be randomly located in several areas where the common reed was present prior to the 2013 treatment to quantitatively document the colonization of these areas by native plant species. Quadrats will be revisited annually to track vegetation changes and follow-up herbicide treatments will be performed in September 2014 as needed. Monitoring results will be submitted to the DMF in October 2014.

Project 3. Upper Great Marsh – Newbury

The Merrimack Valley Planning Commission (MVPC) was awarded \$23,800.00 for a *Phragmites* control project located in the Upper Great Marsh in Newbury. The goal of the proposed project is to return a large section (approximately 1,000 acres) of the northern end of the Great Marsh in

Plum Island Sound to a healthy, natural state. As *Phragmites* is removed from the open, high marsh, native vegetation is expected to naturally re-colonize these areas, and the natural functions of the marsh, that have been impaired by the invasive monocultural growth, the vegetative, benthic, finfish, shellfish, and avian diversity is expected to return.

In a November 2013 project report, MVPC noted that a preliminary monitoring survey of an approximately 600-acre study area occurred in May 2013 to determine the extent and status of *Phragmites* in the 2013 treatment area. The 2013 treatment area coincides with the areas previously mapped and treated in 2012. Newly mapped stands in the open marsh were treated in late September. Preliminary visual post-monitoring in the months of September and October indicated a successful kill of treated Phragmites stands over an approximately 30-acre area.

Project 4. Draka Dam Fish Passage – Three mile River, Taunton

The DMF Diadromous Fish Project was awarded partial funding (\$34,916.96) to help restore diadromous fish passage on the Three Mile River. The goal of this project is to provide spawning access for river herring to Mount Hope Pond by installing a fishway at the Draka Dam restoring the historic connection between the Taunton River and Narragansett Bay. This will allow diadromous fish to reach approximately 45 acres of spawning and nursery habitat upstream of the Draka Dam in Mount Hope Pond. The NOI, Mass Historic Commission and Natural Heritage approvals have been secured for this project and the DEP 401 and Army Corps applications are currently in development. The target date for putting the project to bid is early summer, 2014. Project is currently in the process of securing an additional \$35,000 to cover the remainder of the project costs. This project is a collaborative partnership between MA DMF and Save the Bay.

Table 4. Summary of funds requested and rankings for projects received through the ILF RFP solicitation

		Submitted Proje	cts		Amount Requested	Total Cost of Project		Match funding	ILF % of total cost	Adjusted Average Score	Overall Project Rank
Region	Project #	Short Title	Town	Project Sponsor							
Central	1206	Town Brook	Plymouth	Town of Plymouth	\$ 128,202.00	\$ 1,375,092.20	\$ 1	,246,890.20	9.3%	141.38	1
North	1204	Great Marsh	Newbury	MVPC	\$ 23,800.00	\$ 44,500.00	\$	68,300.00	53.5%	125.75	2
North	1201	Rough Meadows	Rowley	MA Audubon	\$ 14,704.00	\$ 18,206.00	\$	3,502.00	80.8%	124.88	3
South	1203	Muddy Creek	Harwich	Town of Harwich	\$ 50,000.00	\$ 478,250.00	\$	30,000.00	10.5%	120.57	4
South	1208	Draka Dam	Taunton	DMF	\$ 69,000.00	\$ 121,900.00	\$	52,900.00	56.6%	108.17	//////
North	1207	Armstrong Dam	Braintree	DMF	\$ 68,000.00	\$ 106,000.00	\$	38,000.00	64.2%	102.50	6
North	1205	PIS eelgrass restoration	PIS	UNH	\$ 60,000.00	\$ 60,000.00	\$	-	100.0%	102.25	7
North	1202	Snake Island	Winthrop	DMF	\$ 43,747.00	\$ 67,398.00	\$	23,651.00	64.9%	96.33	8

Design proposal - ineligible project

4. IMPORTANT PROGRAMMATIC DEVELOPMENTS

Program expansion

In May 2011, DFG began drafting a conceptual summary for a new ILF program. The new program will include preservation and restoration options for both inland and coastal aquatic resources. ILF eligible permit categories will be expanded to also include the Corps Individual Permits (IP). The proposed expansion is expected to substantially increase the amount of ILF funds generated to address impacts to aquatic resources and habitats resulting from Corps permitted projects in Massachusetts. At the outset of 2014, DFG is in the final stages of receiving approval of its proposed ILF Program Instrument from the Corps.

5. SUMMARY

Fees totaling \$229,117.00 were collected on 27 permits impacting 18,980.40 ft² of aquatic habitats between December 2008 and June 2013, when the MOU between DMF and the Corp expired. The average impact area was 790.83 ft² and the average ILF payment was \$9,546.54 (Table 5). The habitat category with the greatest impacted area is Open Water with 15847.75 ft². The service area with the largest impacted area is the South with 12938 ft² of impacted habitats. There were eleven impacts to aquatic habitats in the North service area, nine impacts in the Central service area, and eleven impacts in the South service area (Figure 1). Three projects impacted multiple habitat types. Ten of the thirty-seven projects where ILF was recommended and assessed elected not to utilize the ILF option (Table 6). There were no impacts recorded in the Connecticut River service area.

ILF funds were expended on projects selected through a Request for Proposals (RFP) process initiated in September of 2012. The project selection committee selected the top three ranked projects for final approval by the Corps. A fourth eligible project was selected for partial funding. A summary of rankings is included in <u>Table 4</u>.

DMF continues to work toward establishing an effective ILF program for Massachusetts under the guidance of the Steering Committee and the Corps. Ongoing ILFP development includes an extensive program expansion effort by DFG that will result in an ILFP that addresses impacts to aquatic resources and habitats state-wide for multiple permit levels. DMF is responsible for tracking the implementation and completion of all projects funded through DMF's ILF program and will continue in this role until all projects have been successfully completed. All funded projects are required to submit annual monitoring reports to DMF for a period of five years.

For addition information, please contact Mark Rousseau at 978-282-0308 x162 or mark.rousseau@state.ma.us.

Figure 1. Impact and Restoration Project Locations 2009 – 2013.

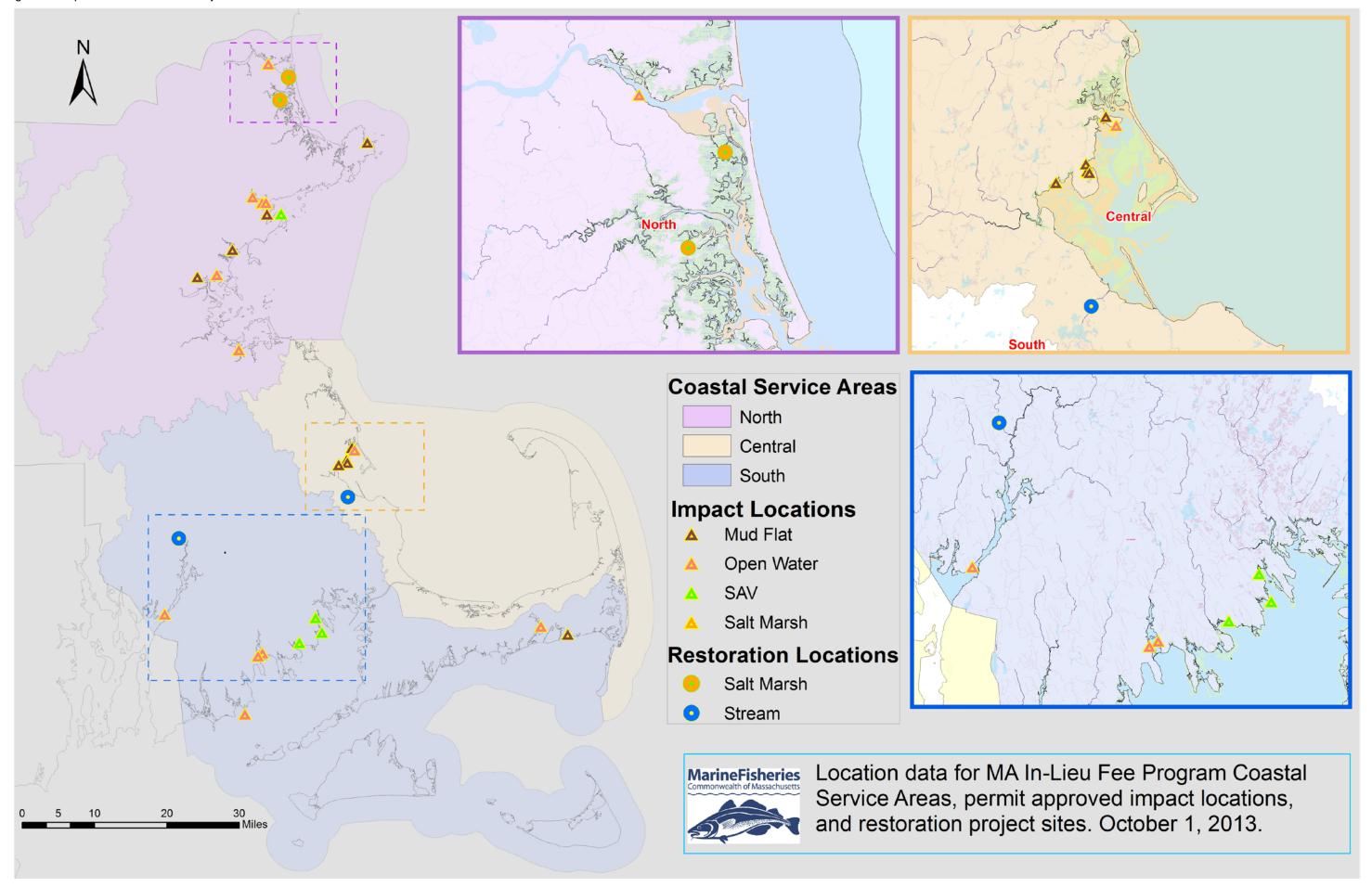


Table 5. ILF Assessed and Used by Permittee

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	,400.00
	,742.00
	,162.50
	,870.00
	,065.00
	,335.00
	,464.50
By Habitat Type Mudflat 13 2200.00 \$	43,950
Open water 12 15847.75 \$1	58,438
Salt marsh 2 213.00	\$4,260
SAV 4 807.25 \$	ψ 4 ,200

^{*}Three projects impacted 2 habitat types. As such, there are 30 habitat impacts but only 27 projects in total.

Table 6. ILF Assessed and Not Used by Permittee

Year Permitted	Region	ACOE Permit #	Habitat Type	Number of habitat impacts	Area of Impact (ft ²)	Sum of fee amounts
2009	Central	2009-2325	Mud Flat	1	1,976	\$39,520.00
	South	2006-2842	Mud Flat	1	145	\$2,900.00
	South	2009-1429	Mud Flat	1	2,560	\$51,200.00
	South	2005-01682	Mud Flat	1	16,165	\$194,450.00
	South	2009-205	Open Water	1	130	\$1,300.00
2012	North	2011-00106	Mud Flat	1	825	\$16,500.00
	North	2011-00106	Open Water	1	526	\$5,260.00
	North	2012-01142	Mud Flat	1	610	\$12,200.00
2013	South	2009-02719	Open Water	1	7,608	\$76,080.00
	South	2009-02720	Mud Flat	1	3,407	\$70,540.00
Total				10	33,952	\$469,950.00
Average					3,407	\$46,995.00
By Region			North	3	1,961	\$33,960.00
			Central	1	1,976	\$39,520.00
			South	6	30,015	\$396,470.00
By Year			2009	5	20,976	\$289,370.00
			2012	3	1,961	\$33,960.00
			2013	2	11,015	\$146,620.00
By Habitat	Гуре		Mud Flat	7	25,688	\$387,310.00
			Open Water	3	8,264	\$82,640.00

Appendix A. Chronology of ILF Program Achievements.

March 10, 2007	Meeting of Corps, NMFS, and DMF to discuss formation of MA ILF program.
August 2007	Draft MOA submitted to Corps and DMF administration.
June 4, 2008	ILF Memorandum of Understanding (MOU) is signed between Corps and DFG.
June 9, 2008	The Corps of Engineers and U.S. Environmental Protection Agency issue regulations pertaining to Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332); Final Rule. This "Federal Mitigation Rule" requires that ILF programs which predate July 9, 2008 come into compliance with the Mitigation Rule within two years of that date [33 CFR332.8(v)(2)].
September 24, 2008	First Steering Committee meeting.
December 2008	Massachusetts ILF Mitigation Program Fact Sheet issued by Corps and posted on Corps and DMF website.
January 6, 2009	First ILF deposit (\$7500) is made into the <i>MarineFisheries</i> Trust Account. MOU requires expenditure of funds no later than 2 years (January 2011) after the first deposit.
June 9, 2010	A three-year extension request for the MOU expiration date is submitted to Corps to bring MA ILF program into compliance with the Federal Mitigation Rule.
June 21 2010	The Corps grants <i>MarineFisheries</i> the extension request. The ILF Program has until June 9, 2013 to come into compliance with the Mitigation Rule.
November 1, 2010	An ILF Steering committee meeting convenes to discuss ILF funds and mitigation options going forward.
November 7, 2010	The ILF program has collected \$34,032.50 to date. In accordance with Section IV (F) of the MOU, the Steering Committee recommends that <i>MarineFisheries</i> file a request to extend the deadline for funds disbursement for an additional 2 years or until the fund reaches \$200K, whichever occurs first.
November 18, 2010	The Corps of Engineers grants <i>MarineFisheries</i> the extension request. <i>MarineFisheries</i> and the ILF Steering Committee will use the intervening time to identify suitable compensatory mitigation sites according to the provisions of the MOU.
March 15, 2011	In-Lieu Fee information is added to the <i>MarineFisheries</i> website. http://www.mass.gov/dfwele/dmf/programsandprojects/fee_mitigation.htm
May 31, 2011	The Massachusetts Department of Fish and Game (DFG) express interest to the Corps in developing a comprehensive, statewide ILF program. Representatives from DFG agencies meet with Corp representative in Boston to discuss pursuing an expanded statewide ILF program.
September 1, 2011	14 projects totaling \$137,097.50 in fees collected, impacting 12,192.75 ft ² of EFH.
February 7, 2012	DMF is awarded a \$20,000 Research and Planning grant from the Mass Bays Program. The project, <i>Identifying and Prioritizing Restoration Opportunities for Coastal Aquatic Habitats in the Mass Bays Region</i> will help identify and prioritize restoration options, and develop a sound,

April 9, 2012	technical, repeatable ranking methodology for prioritizing potential restoration and enhancement projects to be used when selecting coastal restoration projects receiving ILF funds. Steering Committee meeting. To date, 19 projects totaling \$180,757.50 in fees collected, impacting 15,233.75 ft ² of habitat.
July 27, 2012	Twenty projects, impacting 22 habitat types, totaling \$193,432.50 in fees collected, impacting 16,351.25 ft ² of habitat.
September 20, 2012	Meeting of Steering Committee to discuss project funding options. A 12% administration charge from the accrued fees was also proposed by DMF and agreed upon by the Steering Committee.
September 21, 2012	RFR soliciting project to be considered for funding under the ILFP posted on Commonwealth's Comm-PASS website and distributed statewide to restoration professionals.
September 26, 2012	DFG submits "Final Prospectus for State-wide ILFP" to the Corps.
October 2, 2012	Corps publishes the public notice on DFG's Prospectus
October 31, 2012	RFR deadline to submit proposals for funding through the DMF ILFP.
December 20, 2012	Projects selected by the Steering Committee and approved by the Corps for funding through the ILF program notified.
January 2013	DFG solicits proposals for the development of DFG's ILF Program Instrument
February 2013	DFG selects consultants Sage Advisors to draft the ILF PI with guidance from DFG
June 8, 2013	ILF MOU between DFG and Corps expires.
September12, 2013	DFG submits draft ILF Program Instrument to the Corps for formal review
September 30, 2013	The Corps determines that the "Commonwealth of Massachusetts Draft In-Lieu Fee Program Instrument" dated September 12, 2013 is complete in that it addresses the required elements as described in the Mitigation Rule (33 CFR 332).
February 6, 2014	DFG submits a revised Draft Instrument to the Corps in response to comments on the instrument by the Corps and the IRT.