



PROCUREMENT JUSTIFICATION FORM (PJF)

This form must accompany all contract requests and sole source requisitions (RQS) over \$5,000 submitted to the Division of Procurement Services.

INSTRUCTIONS: Please provide the requested information in the white spaces below. All responses (except signatures) must be typed; no hand-written forms will be accepted. See the guidance document posted with this form on the Division of Procurement Services intranet site (Forms page) for additional instructions.

PART I: OVERVIEW				
Department Office/Division/Program:		DMR Sea-Run Fisheries and Habitat		
Department Contract Administrator or Grant Coordinator:		Danielle Frechette / Marge Morissette		
(If applicable) Department Reference #:				
Amount: (Contract/Amendment/Grant)	\$ 86,758	Advantage <u>CT</u> / RQS #:	13A 20220527000000003088	
CONTRACT	Proposed Start Date:	7/1/2022	Proposed End Date:	6/30/2024
AMENDMENT	Original Start Date:		Effective Date:	
	Previous End Date:		New End Date:	
GRANT	Project Start Date:		Grant Start Date:	
	Project End Date:		Grant End Date:	
Vendor/Provider/Grantee Name, City, State:		University of Maine		
Brief Description of Goods/Services/Grant:		Conduct telemetry study to understand behavior and survival of Atlantic salmon kelts in Maine rivers		

PART II: JUSTIFICATION FOR VENDOR SELECTION			
Check the box below for the justification(s) that applies to this request. (Check all that apply.)			
<input type="checkbox"/>	A. Competitive Process	<input type="checkbox"/>	G. Grant
<input type="checkbox"/>	B. Amendment	<input type="checkbox"/>	H. State Statute/Agency Directed
<input checked="" type="checkbox"/>	C. Single Source/Unique Vendor	<input type="checkbox"/>	I. Federal Agency Directed
<input type="checkbox"/>	D. Proprietary/Copyright/Patents	<input type="checkbox"/>	J. Willing and Qualified
<input type="checkbox"/>	E. Emergency	<input type="checkbox"/>	K. Client Choice
<input type="checkbox"/>	F. University Cooperative Project	<input type="checkbox"/>	L. Other Authorization

Please respond to ALL of the questions in the following sections.

PART III: SUPPLEMENTAL INFORMATION

1. Provide a more detailed description and explain the need for the goods, services or grant to supplement the response in Part I.

Unlike Pacific salmon, Atlantic salmon are iteroparous, meaning they are able to spawn more than once. Repeat spawners may compromise a significant proportion of a self-sustaining Atlantic salmon population, with estimates reaching upwards of 60% for some populations (Lawrence et al. 2016). Repeat spawners provide considerable benefits to Atlantic salmon populations as repeat spawning females are considerably larger than first time spawners, with significantly greater fecundity. Egg size is also typically larger, resulting in increased fitness of their progeny. A salmon population with a higher proportion of repeat spawners is widely considered to be more resilient and better able to compensate for the many threats posed through their life-cycle (Babin et al., 2021; Baktoft et al., 2020; Lawrence et al., 2016; Maynard et al., 2018). It has been estimated that a high proportion of repeat spawners may reduce the probability of population decline by 27% or greater (Lawrence et al., 2016).

Since 1970, repeat spawners have represented just over 1% (on average) of the US adult returns (Maynard et al. 2018). The low proportion is likely due to a number of factors such as poor marine survival, impacts from hatcheries and the presence of dams on all major river systems. This is especially true for the Penobscot River, which, on average, has accounted for 70% of adult returns since 1990 and is host to a number of main-stem dams. Survival after spawning may be quite high (~80%) for first time spawners (Maynard et al., 2018). It is thought that a small proportion of salmon that survive the first time spawning migrate back to the ocean in the fall. The majority (>80%) overwintering the river and then out-migrate in the subsequent spring.

Outmigrating post-spawned salmon are subjected to similar challenges as outmigrating smolts when it comes to traversing dams. Post-spawned adults may experience both direct mortality (e.g., turbine strikes) and indirect mortality (through injury of delay leading to increased predation or disease risk). Given their larger size, post-spawned adults likely experience higher levels of mortality than the smaller conspecific smolts. Since kelts have represented such a small proportion of the adult spawners in recent years, our dam-related research and management efforts have been focused on minimizing the negative impacts of dams on outmigrating smolts and upstream migrating adult first-time spawners. Given the dire status of U.S. Atlantic salmon populations, kelts (both hatchery and in-river) represent an untapped and underappreciated recovery resource., Our research efforts will focus on i) the impacts of dams on kelt survival and ii) model the likely importance of kelts to the recovery of the Gulf of Maine Distinct Population Segment.

This work is timely as opportunities to study kelts is aided by ongoing changes in conservation hatchery operation. With USFWS hatcheries at capacity and high-quality areas of habitat in Maine left underutilized, the management partners have agreed that bold action is needed to restore salmon to freshwater habitats. In light of this, the agencies have initiated planning for a net-pen based effort aimed at producing adult Atlantic salmon. This novel approach (referred to as the Salmon for Maine Rivers program) has widening the circle of collaboration to include other state agencies (DEP), industry (Cooke Aquaculture), NGOs (TNC, ASF, DSF), and the public. Importantly for this purpose, adult fish will be available for both pre and post-spawn assessment.

This work also effort builds upon existing funded studies (NMFS, DMR, TNC) to understand how dams affect upstream survival of returning adult salmon and downstream survival of Atlantic salmon smolts.

PART III: SUPPLEMENTAL INFORMATION

Assessment of kelt passage at dams is a logical extension to the upstream adult studies and downstream smolt studies that have been conducted in Maine rivers. Existing infrastructure and expertise in conducting telemetry studies on returning adults and emigrating smolts will considerably reduce the cost to conduct this study.

This study will evaluate the following factors:

- Range of route specific survival/mortality at dams (i.e. spillway/ turbine/downstream fishway)
- Identify differences in kelt survival in reaches with and without dams
- Identify difference in adult and kelt movement/behavior in rivers/reaches with and without dams
- Identify delayed effects (physical or energetic) of dam passage for kelts (eg, injuries that could lead to infection or predation, energetic effects of delay that lead to a loss of iteroparity)

2. Provide a brief justification for the selected vendor to supplement the response in Part II. Reference the RFP number, if applicable.

The University of Maine and Maine Cooperative Fish and Wildlife Research Unit has the facilities, equipment, and training to conduct this study, which will leverage the extensive freshwater array deployed within the Penobscot River and estuary by the Maine Cooperative Fish and Wildlife Research Unit.

3. Explain how the negotiated costs or rates are fair and reasonable; or how the funding was allocated to grantee.

A budget proposal was submitted to the Maine DMR and accepted for funding.

4. Describe the plan for future competition for the goods or services.

If in the future, another vendor becomes available that has the adequate facilities and capabilities to fill this role, each will be evaluated equally.

PART IV: AMERICAN RESCUE PLAN ACT (ARPA) / MAINE JOBS & RECOVERY PLAN (MJRP)


Does this request utilize ARPA/MJRP funds?

Yes – If Yes, please attach the approved Business Case(s).

No – If No, proceed to Part V.

PART V: APPROVALS

The signatures below indicate approval of this procurement request.

Signature of requesting Department's Commissioner (or designee):			
Typed Name:	Patrick Keliher, Commissioner	Date:	6/25/22
Signature of DAFS Procurement Official:	<small>DocuSigned by:</small> <i>Kathy Paquette</i>		
Typed Name:	<small>41C2BA36FAF44CD...</small> Kathy Paquette	Date:	7/28/2022