



**Saltonstall-Kennedy Grant Program
Final Report**

January 31, 2005

Supplement June 2005

(n.b. supplemental information -- in response to NOAA May 25, 2005 letter from Harold C. Mears to Lawrence Waxler -- appears throughout this version of the report in italics)

- A. Grant Number: 2-NER-037 *NA03NMF4270123*
- B. Amount of Grant: Federal \$76,204.00; Match \$13,412.00; Total \$89,616.00
actual expenditures this period: Federal \$52,009.57; Match \$9,153.57 ; Total \$61,163.14

Total actual federal expenditures amounted to less than 69% of grant award. This was due in large part to the change in scope of the project resulting from the state of Maine's efforts to convene an Aquaculture Task Force during the project period. The PI determined that the Task Force meetings served some of the purposes outlined in the project proposal and to have convened separate meetings as outlined in the project proposal would have resulted in duplicative work at significant expense.

- C. Project Title: Atlantic Salmon Aquaculture Considering Endangered Status of Atlantic salmon and Clean Water Act
- D. Grantee: Marine Law Institute/University of Maine Law School
(an administrative unit of the University of Southern Maine)
- E. Award Period: From 1 July 2003 to 30 June 2004 ("No additional cost" extension through Dec 31, 2004).
- F. Period Covered by this Report: 1 July 2003 to 31 December 2004

Some additional information was gathered and integrated into the revised White Paper draft in the first half of 2005.

G. Summary of Periodic Progress and Expenditures to Date:

1. Work Accomplishments:

- a. Describe tasks scheduled for the period (from proposal and amendments, if appropriate) and
- b. Describe tasks accomplished.

Month 1

a) PI/Duff assigns computer-assisted legal research (CALR) tasks to Research Associate(s); begins review of statutes, regulations and case law related to application and enforcement of Endangered Species Act, Clean Water Act and other laws with respect to

aquaculture operations; instructs Research Associate(s) in background and recent enforcement of laws under review.

b) **Complete** (new information re: change in laws and policies was monitored and integrated into research and analysis throughout remainder of project period)

Month 2

a) Duff reviews results of CALR and assigns work to be conducted in the composition and publication of Guides to be used during preliminary discussions with stakeholders: e.g. "How Does the ESA apply to Aquaculture Operations in Maine;" and "How Does the Clean Water Act apply to Aquaculture Operations in Maine."

b) **Complete** (i.e. work assigned to student researchers)

This work was circulated in the form of a document ultimately captioned: *Aquaculture Laws and Regulations: A Primer for Maine Atlantic Salmon Aquaculture Operators - Answering the questions you've been asking* (the last version of which was circulated in Fall 2004)

Month 3

a) PI/Duff contacts members of Maine's Atlantic salmon aquaculture industry, state departments overseeing aquaculture development and water quality protection, and Sea Grant and Cooperative Extension Services to evaluate additional ESA and CWA application and enforcement activity that impacts industry.

b) PI contacted members of Maine's Atlantic salmon aquaculture industry, state departments overseeing aquaculture development and water quality protection, and Sea Grant and Cooperative Extension Services. Those contacts indicated that the state of Maine was creating an Aquaculture Task Force (see <http://www.maine.gov/dmr/aquaculture/aqttaskforce/aqthomepage.htm>) designed to elicit the type of information originally contemplated in this project's proposal. As that Task Force proceeded with its work, PI collected relevant information and questions from its proceedings and integrated those into this project.

Months 4-6

a) PI/Duff and Research Associate(s) publish and distribute preliminary Q and A documents; contact aquaculture operators to expand guides.

b) (draft Q and A document included in prior Project Progress Report) Changes in the net pen salmon aquaculture regulatory system resulting from cases in litigation and rule-making at the state and federal level required that the state of aquaculture law considered in months 1-6 be reviewed and revised accordingly.

Month 7

a) Duff and Research Associate(s) plan public forum on "Balancing environmental laws and Atlantic salmon aquaculture development." Speakers invited will represent marine aquaculture managers and/or proponents, environmental community representatives, legal scholars, policy-makers.

b) efforts of state Aquaculture Task Force supplanted this effort.

Months 8-9 (March-April 2004)

- a) PI/Duff and Research Associate update draft Aquaculture Guides listed above.
- b) Revised guides continued in drafting stage to regularly incorporate ongoing changes resulting from litigation and regulatory changes.

Months 10 -12 (May-June 2004)

- a) Duff and Research Associate(s) coordinate public forum on "Balancing environmental laws and Atlantic salmon aquaculture development." Speakers invited will represent marine aquaculture managers and/or proponents, environmental community representatives, legal scholars, policy-makers.
- b) efforts of state Aquaculture Task Force supplanted this effort.

The Maine Aquaculture Task Force, convened in 2003-2004, initiated and administered a series of public meetings that effectively supplanted the P.I.'s intended meetings on issues related to the impact of environmental laws on Atlantic salmon aquaculture development. Accordingly, the scope of the project was modified to eliminate duplicative efforts that would have incurred significant (project-wise) resources to convene public forums on issues that had already been addressed via the Aquaculture task Force meetings.

Months 13-18 (July - December 2004)

- a) PI/Duff and updated preliminary/draft materials for final version.
- b) Revised guides continued in drafting stage to regularly incorporate ongoing changes resulting from litigation and regulatory changes. In November 2004, revised draft Q and A document circulated for review. Recipients identified as participants in Northeast Aquaculture Conference and Exposition (NACE 2004) were contacted and notified of opportunity to discuss document at NACE meeting in Manchester in December 2004. PI met with representatives of industry and state-aquaculture development center to discuss revisions for final draft.

A revised White Paper was circulated in June 2005. The paper solicited comments and question from recipients on or before July 30, 2005 which could be addressed in a Final Revised White paper to be distributed in September 2005.

Distribution of results of research and analysis:

1. *J.Duff, Salmon Aquaculture Struggles in Maine, 26:4 THE COASTAL SOCIETY BULLETIN 1 (2004). (summary of Clean Water Act and Endangered Species Act related legal and regulatory constraints on net pen salmon aquaculture operators viewable at: http://www.uhi.umb.edu/thecoastalsociety/tcs_pdfs/Issue_2004n4.pdf) (hard copy enclosed)*
2. *J. Duff, Aquaculture Laws and Regulations: Answering the questions you've been asking about Maine Atlantic salmon aquaculture (Question and Answer monograph) Question and Answer monograph is available on the Marine Law Institute's website at:*

<http://www.mli.usm.maine.edu/puboutreach.htm>

The direct URL for this monograph in .pdf format is:

<http://www.mli.usm.maine.edu/January2005QandA.pdf>

(hard copy of this monograph is enclosed).

3. J. Duff, *ATLANTIC SALMON AQUACULTURE: CONSTRAINTS AND INFLUENCES OF IMPLEMENTATION OF THE CLEAN WATER ACT AND THE ENDANGERED SPECIES ACT (Research White Paper)* Posting of the revised Research White Paper will also be made on the Marine Law Institute's website at:
<http://www.mli.usm.maine.edu/puboutreach.htm>
(hard copy of this monograph is enclosed).

Question and Answer monograph (Item #2) and Revised Research White Paper (Item #3) were distributed to state Aquaculture Task Force members and Aquaculture Task Force Advisory Panel Members. Those individuals were solicited to reply to the PI with remaining questions that will be addressed in a Final Revised White Paper.

PI's related research:

J. Duff, T. Getchis and P. Hoagland, *A Review of Legal and Policy Constraints to Aquaculture in the US Northeast - Aquaculture Whit Paper No. 5* (2003).

http://www.old.umassd.edu/specialprograms/nrac/publications/white_papers_2003/wp_no5_policy.pdf

- c. Explain differences between scheduled and accomplished work, etc.

While the project began in earnest in July 2003, the final confirmation of the project/grant did not arise until 25 August 2003 (albeit confirmed relating back to 1 July 2003). As a result, those matters outlined in the timetable related to legal research and review were the focus of the project through month 8 of the project and the efforts to contact industry stakeholders (slated for months 3-7) were delayed.

Additionally, three significant events occurred during the project period prompting a re-scoping of the project:

- 1) On June 30, 2004, EPA promulgated a final rule to establish wastewater controls for concentrated aquatic animal production facilities (i.e., fish farms). The regulation applies to facilities that generate wastewater from their operations and discharge that wastewater directly to waters of the United States. The rule constitutes a set of requirements that are to be applied in aquaculture NPDES permits. The final rule went into effect on September 22, 2004.

- 2) In June 2004, the National Marine Fisheries Service (NMFS) and the US Fish and Wildlife Service published a *Draft Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon (*Salmo salar*)* in accordance with the Endangered Species Act.¹ The Draft

¹ National Marine Fisheries Service and U.S. Fish and Wildlife Service. 2004. Draft Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon (*Salmo salar*). [hereinafter Draft Recovery Plan] National Marine Fisheries Service, Silver Spring,

Recovery Plan (DRP) specifically refers to concerns related to aquaculture operations in the vicinity of the distinct population segment of salmon sought to be protected.

3) As noted above, the state of Maine created an Aquaculture Task Force.

These three events prompted the PI to reset the scope of the project to:

- Eliminate redundant efforts to elicit information and issues of concern from aquaculture firms, public agency officials and other interested parties;
- Reduce expenditures related to originally contemplated survey method in light of information that would be gathered and made available via the Aquaculture Task Force (federal grant-funded expenditures associated with this project were ultimately reduced by approximately 32%);
- Consider unanticipated changes to case law and regulatory law developments during the project period that could affect aquaculture operators regarding application of Clean Water Act and Endangered Species Act laws and implementing regulations; and,
- Integrate new legal and regulatory information; and,
- Distribute research finding in a wider range of formats to a wider audience.

2. Expenditures:

a. Describe expenditures scheduled for this period: \$89,616 through December 31, 2004.
Federal \$76,204 Match \$13,412 Total \$89,616

b. Describe actual expenditures this period

\$52,009.57 Federal + \$9,153.57 USM/Recipient = \$61,163 Total as of 12/31/04
(reported by USM Office of Sponsored Programs)

c. Explain special problems, differences between scheduled and actual expenditures, etc. 'No additional cost' extension accommodates the ongoing nature of the project beyond its original time line and as allowed through the NOAA grant extension through Dec. 31, 2004. Differences between grant award amount and actual lesser expenditure resulted from the change in scope of the project (described above).

Prepared By: _____
John A. Duff, PI