



## Semi-Annual Report

Submitted to the Northeast Consortium

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<b>Project Title</b>	<b>Industry-science partnership investigating the short-term and long-term discard mortality of spiny dogfish using commercial hook gear in the Gulf of Maine.</b>	
<b>Contract #</b>	PZ07009	
<b>Contracted</b>	Gulf of Maine Research Institute	
<b>Contract period</b>	July 1, 2006 – June 30, 2007	<b>Amount</b>
		\$167,970

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<b>Period being reported</b>	July 1 2006 through November 30 2006 (5 months).
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**Submitted by:**

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Shelly Tallack (GMRI Principal Investigator)

11/16/06

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Date

## 1. Summary of Scope of Work

This report refers to the Scope of Work contracted by the Northeast Consortium to undertake an industry-science study on short-term and long-term discard mortality of spiny dogfish using commercial hook gear in the Gulf of Maine. Core goals and deliverables include:

- Work collaboratively with industry individuals recruited through both GMRI and the CCCHFA.
- Assess the short-term survivability of dogfish caught through commercial hook gears through holding studies in cages.
- Assess long-term survivability (up to 1 month) through holding hook-caught dogfish in a pen (CCCHFA only).
- Undertake dedicated research trips during July and August of 2006 to complete the field work.
- Analyze data and prepare for presentation at appropriate fishing/research meetings.
- Develop a website summarizing the progress of this project.
- Prepare a final report for funders and industry upon completion of this contract.
- Prepare a manuscript for publication in a peer-reviewed journal.

## 2. Project participants

Co-Primary Investigators are Dr. Shelly Tallack (GMRI) and Lara Slifka (CCCHFA). Sarah Whitford (GMRI) has played a substantial role, as research technician, in the database development and coordination of data entry. Technicians recruited by CCCHFA included: Peter Schimmel, Nat Mason, Scott Donahue and Mike Britton. Vessel owners who have participated in this project are listed below:

Vessel	Permit #	Hull	Owner	Street	City	St	Zip
Survivor	240736	619131	Christopher S Andrews	41 Reed Street	Westbrook	ME	04092
Special J	233480	1142517	John D Shusta	7 Foxtail Drive	York	ME	03909
Miss Morgan	222173	944540	Glen T Legeyt	42 Kings Way	Hyannis	MA	02601
William Gregory	232043	979710	Roger W Horne	122 Training Field Road	Chatham	MA	02633
Yellow Bird	230420	570228	James B Eldredge	Po Box 369	West Chatham	MA	02669
Sea Holly	222753	1028732	Mark V Leach	879 Orleans Road	Harwich	MA	02645
Jan & Bill			Will Martin	48 Partridge Lane	Harwich	MA	02645

## 3. Major accomplishments and milestones

### 3.1 Project Design

GMRI and CCCHFA have collaborated fully in order to finalize the experimental design, design and purchase necessary gear, and to trouble-shoot procedures as needed. Shelly Tallack (GMRI) and Lara Slifka (CCCHFA) also took advantage of an opportunity to attend a discard mortality workshop coordinated by RI Seagrant in August 2006; this led to additional improvements to the project, e.g. incorporating the RAMP (Reflex Action Mortality Predictor) into the data collection stage.

### 3.2 Permitting and contracts

During the early months of this project, before the NEC contract was secured, considerable time and effort was invested to obtain the necessary permits and documentation to undertake this study. Specifically, GMRI applied for LOAs for all vessels likely to be involved in the study (Jan 06). GMRI and CCCHFA jointly responded to NEPA review comments (Nov 05 & May 06). GMRI and CCCHFA then submitted the proposal for IACUC approval; a somewhat lengthy and unexpected procedure, this was secured at the end of June 2006. While eventually successful, the IACUC process delayed the start date on the contract and as such, field work was behind schedule by one month.

### 3.3 Cage design and equipment purchase

GMRI and CCCHFA consulted with John Mendelman (NEAQ) on the design of the dogfish cage. Eventually a novel round cage was developed which incorporated minimal use of metal and was appropriate in size for handling on smaller hook vessels. These cages were a success and served the project well. Cage design and other small gear purchases took place from Mar-Jun 06.

### 3.4 Research trips: short-term discard mortality

Dogfish research trips were undertaken during August and September of 2006 (one month behind schedule). Both GMRI and CCCHFA undertook all required trips and by the end of the field season. The following table summarizes the number of trips undertaken by each organization and the total number of dogfish caged for the short-term assessments.

Month	Organization	No. dogfish caged – short-term	No. trips
August	GMRI	376	9
	CCCHFA	353	3
September	GMRI	334	4
	CCCHFA	881	8

For long-term discard mortality assessments, see 'Unexpected difficulties and project alterations'.

### 3.5 Data entry, management and analysis

GMRI and CCCHFA worked together to design the required datasheets and associated database. GMRI took the lead on developing the database templates, but both GMRI and CCCHFA have been responsible for entering their own data.

During October 2006, Lara Slifka joined Shelly Tallack and Sarah Whitford for a two-day data analysis session during which the target analyses were decided upon and analysis began. Analysis is currently still underway and it is anticipated that preliminary results will become available during December 2006, with analysis completed by the first quarter of 2007.

## 4. Unexpected difficulties and project alterations

### 4.1 Pen

There were several complications during the design and implementation stages of the pen. Due to strong tides and legality issues, the original location for the pen was found to be unfeasible. Discussions with the town harbormaster, the Coast Guard and local fishermen led to the determination that there was too great of a possibility that the pen would move or sand would build up on the bottom of the cage making it impossible to remove the pen at the end of the study. The original location had also generated controversy with local recreational boaters and would have left CCCHFA liable to lawsuits. Thus, CCCHFA converted a fish weir that was already in place in a different location into a pen. The weir was registered with the Coast Guard, and owned by a local fisherman leaving the CCCHFA legally unaccountable.

Project delays meant that water temperatures were at their maximum and were apparently above dogfish limits, since the dogfish placed in the pen did not survive. It was thus decided to abort this part of the study.

## 5. Next steps

GMRI and CCCHFA will continue to work on analyzing the data with the aim of:

- Preparing findings for presentation at appropriate fishing/research meetings.
- Developing a website summarizing the progress of this project.
- Preparing a final report for funders and industry upon completion of this contract.
- Preparing a manuscript for publication in a peer-reviewed journal.

## 6. Impacts on fishing and scientific community

To date impacts have been limited to involving four vessels in the implementation of this project; the crew and owners have enjoyed working on this project and have benefited from being involved in

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research, while also benefiting financially. In addition, an article summarizing the study will appear in the November 2006 publication of Commercial Fishing News.

Future impacts will depend on the results, which will be disseminated to both the fishing and science community via the website and presentations.

## 7. Photo gallery



Stacked cages



FV Survivor – Chris Andrews & Eric Tumevin



Loading a cage



A hooked dogfish