



## COMMERCIAL FISHERIES RESEARCH FOUNDATION

P.O. Box 278, Saunderstown, RI 02874

Phone: (401) 515-4892 | Fax: (401) 515-3537

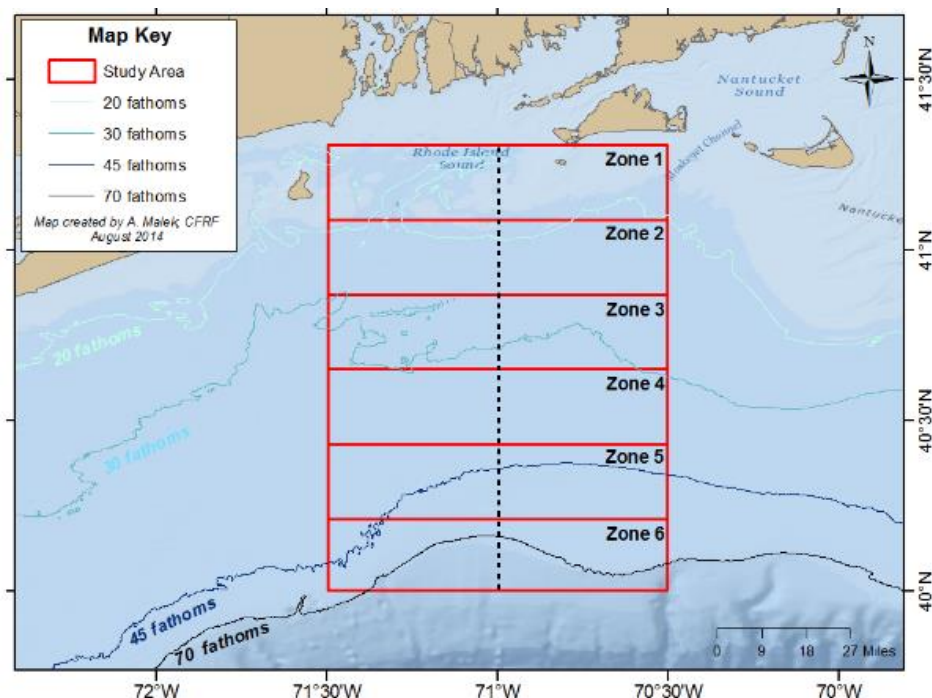
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### Commercial Fisheries Research Foundation (CFRF)

#### Shelf Research Fleet

##### General Description:

- The CFRF, in partnership with scientists at the Woods Hole Oceanographic Institution (WHOI), is organizing a fishing vessel research fleet to collect temperature and salinity data in six designated areas across the continental shelf off the coast of Rhode Island over the course of the next two years. (See map below)



- The purpose of the project is to study changes in oceanographic conditions, particularly temperature, in order to better understand how these changes may impact the distribution and abundance of key fisheries resources.
- More specifically, the data obtained will be used to learn more about: 1) seasonality of temperature across the continental shelf, including how thermoclines set up and break down (thermoclines are areas in the water column where temperatures change rapidly – they can act as temporary barriers separating warmer surface water with cooler bottom water); and 2) the onshore movement of warm, saltier water from the slope and Gulf Stream up onto the shelf.
- Fishermen participating in the research fleet will deploy a CTD (Conductivity, Temperature Depth instrument; photo below) over the side of their vessels on a bi-weekly basis to record

temperature and salinity data in portions of the study area. The data obtained will be available for viewing onboard the fishing vessel using iPad tablets provided by WHOI.



- Participating fishermen will have a chance to participate in workshops with WHOI scientists to share their on-the-water observations about fish movements in the study area, discuss the data collected, and help interpret the results.

#### Vessel Responsibilities:

##### *Data Collection:*

- Data collection will be done with an easy-to-use conductivity, temperature, and depth instrument (CTD).
- Fishermen will deploy the CTD over the side of the fishing vessel while the vessel is stationary, lower it to the bottom, and then raise it back to the surface and onto the deck. The CTD will continuously record measurements while it is in the water column and the on-board iPad will automatically receive and plot the data.
- Fishermen will have the option of entering notes regarding general observations, such as: tides, weather conditions, bottom type, and targeted species in the fishing area to submit as supplementary information to the scientists receiving the CTD data.

##### *Sampling Frequency:*

- Each participating fishing vessel will be responsible for sampling two stations within the sampling area (to be assigned based on fishing locations and transit patterns) every other week (twice a month).
- Participating fishing vessels will rotate through data collection responsibilities over the course of the year, with three fishing vessels sampling bi-weekly.
- Consideration will be given to fishing activity plans and patterns in setting up the data collection plan.

##### *Training:*

- All vessel captains and/or designated crew members will be required to participate in an initial data collection training session to learn how to deploy the equipment. [This will be scheduled at

the Commercial Fisheries Center Building on East Farm Campus, URI. The CFRF support staff will accommodate offshore vessel captains and crew by offering additional training opportunities, if needed.]

- Additional support from technical staff will be provided throughout the pilot project as needed, and CFRF will meet participating fishing vessels at their home dock periodically to assist with equipment transfer, etc.

*Feedback:*

- Vessel captains and/or designated crew members will be asked to participate in at least one of the 2-3 CFRF-organized workshops over the course of the 2 year project to discuss findings.

Compensation:

- A stipend of \$350/month will be granted to participating fishing vessels for each month of data collection (this will be for 4 deployments each month – bi-weekly from two stations).
- All equipment, training, and technical support will be provided to each participating vessel without cost.

Planned Timeline:

- June 2017-May 2019: Phase II of the Shelf Research fleet, focused on bi-weekly collection of at-sea data collection; Ongoing data compilation/synthesis

For more information please contact: *Anna Malek Mercer, CFRF Executive Director at (401)515-4662 or [amalek@cfrfoundation.org](mailto:amalek@cfrfoundation.org)*