

Using midwater netting to verify acoustic targets for hydroacoustic assessment of tidal power development

Global climate change concerns have augmented the promotion of renewable energy technologies such as tidal power. The goal of this project was to determine fish species composition and abundance at specific times and depths within Cobscook Bay and Western Passage, Eastport, Maine. Secondly, the project was designed to determine whether estimates of abundance are comparable between net sampling and hydroacoustic sampling to evaluate the relative value of netting and hydroacoustic monitoring in tidally dynamic locations. A net was deployed during the months of May, June, and August. The catch results were then compared to hydroacoustic data collected during the same spatial and temporal parameters. There were more fish observed on the hydroacoustic SIMRAD than caught during net deployment. *Myoxocephalus octodecimspinosus*, *Hemitripterus americanus*, *Cycloperos lumpus*, *Scophthalmus aquosus*, *Zoarces americanus*, *Pseudopleuronectes americanus*, *Raja ocellata*, and *Gasterosteus aculeatus* were found while netting. Due to the limitations of both netting and hydroacoustic assessment, it would be difficult to rely on just the information obtained from one of these analyses. Due to the benthic, slow swimming behavior of the fish species caught, it is hypothesized that these fish are unable to avoid the netting apparatus. It is also hypothesized that the faster swimming fish found within Cobscook Bay and Western Passage such as herring and mackerel may have the ability to avoid the netting apparatus.

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