

# HARBOR PORPOISE TAKE REDUCTION PLAN (HPTRP) RESEARCH NEEDS AND PRIORITIES

NOAA's National Marine Fisheries Service  
Northeast Regional Office, Protected Resources Division

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WORKING MATRIX

## Background

The Harbor Porpoise Take Reduction Plan (HPTRP) was implemented on December 2, 1998 (63 FR 66464) to reduce the serious injury and mortality of the Gulf of Maine/Bay of Fundy stock of harbor porpoises in commercial gillnet fisheries. The HPTRP is separated into a New England and a Mid-Atlantic component. The New England component specifies both seasonal closures and pinger requirements within its management areas for sink gillnet gear or gillnet gear capable of catching multispecies. The Mid-Atlantic component specifies both seasonal closures and gear modification requirements within its management areas for commercial gillnet gear. The HPTRP was recently amended (75 FR 7383, February 19, 2010) to implement additional conservation measures to reduce bycatch levels, including measures to address low compliance within HPTRP management areas.

NMFS has developed a strategy to monitor the effectiveness and regulatory compliance of the HPTRP ([http://www.nero.noaa.gov/prot\\_res/porptrp/doc/HPTRP%20Monitoring%20Summary%204-2-2010.pdf](http://www.nero.noaa.gov/prot_res/porptrp/doc/HPTRP%20Monitoring%20Summary%204-2-2010.pdf)). One component of the monitoring strategy is to identify and prioritize, on an annual basis, biological and gear research needs to support the HPTRP. While the HPTRP is data-rich in that there are sufficient observer data to reliably estimate annual harbor porpoise bycatch rates in gillnet fisheries, research projects to assist management would be beneficial in areas such as developing alternative methods for reducing harbor porpoise bycatch levels and learning more about the biology of harbor porpoises.

Some of the research needs identified have been recommended by the Harbor Porpoise Take Reduction Team (HPTRT), which is a group of stakeholders (e.g., fishermen, Federal and state managers, environmentalists, Fishery Management Council and interstate fisheries commission staff, and academics/scientists) that is convened to address marine mammal bycatch issues in commercial fisheries. Other research needs have been identified by NMFS biologists and managers.

The gear research needs focus on developing alternative bycatch reduction methods that have similar or higher conservation benefits than the current HPTRP measures that also can feasibly be used in the gillnet fisheries. The biological information needs focus on collecting information about harbor porpoise behavior in the vicinity of gillnet gear, and on potential effects of other fisheries on harbor porpoise distribution.

**Serious Injury and Mortality Reduction Resulting from Fisheries Bycatch:** Research is needed on alternative gear modifications such as higher frequency pingers and other net designs and configurations that efficiently reduce harbor porpoise interactions with gillnet gear.

**Biological Information Needs:** Harbor porpoise behavior around gillnet gear has been poorly studied but would be beneficial in determining further methods for reducing bycatch levels. Additionally, little information is known about how other fisheries and fishing pressure affect the distribution of harbor porpoises.

For further information or questions: Please visit the Harbor Porpoise Take Reduction Plan website at: [www.nero.noaa.gov/hptrp](http://www.nero.noaa.gov/hptrp).

### Harbor Porpoise Take Reduction Plan (HPTRP) - RESEARCH NEEDS

Research Topic	Research Activity	Need for Activity	Priority (1 highest; 5 lowest)
<b>FISHERY BYCATCH</b>			
<b>Serious Injury and Mortality Reduction</b>	Evaluate bycatch reduction using higher frequency pingers.	Fishermen in localized areas have indicated that the current pinger specifications (10 kHz) may be alerting seals to the nets to depredate. Higher frequency pingers are outside of the hearing range of seals but still within that of harbor porpoises.	1
	Test the effectiveness of different gear modifications (e.g., thicker twine, barium sulfate gillnets) for reducing the bycatch of harbor porpoises.	Are there other gear modifications that can provide the same conservation benefit as existing ones?	1
	Development of a low-cost device or technology that would allow industry to test the functionality of their pingers in the field. This could include making modifications to pingers themselves to demonstrate whether or not the pinger is operating (e.g., incorporate a blinking light).	While pingers are audible to most humans, activities on board a fishing vessel, combined with the presence of multiple pingers, could hinder the ability to hear every pinger to ensure that every pinger is properly functioning. A low-cost device available on the market would allow fishermen to properly maintain their pingers by allowing them to test their functionality. Additionally, a blinking light on a functioning pinger would allow for quick inspection of pinger functionality.	1
	Development and evaluation of a device to document and monitor soak times of gillnet gear.	Long soak times have been documented as leading to a higher bycatch of marine mammals and other marine life, such as Atlantic sturgeon.	2
	Test the use of and effectiveness of pingers in HPTRP management areas in the Mid-Atlantic versus the current gear modification requirements.	Currently the HPTRP requires a suite of gear modifications in the Mid-Atlantic. Pingers have never been tested here but could be required in the future if the current suite of gear modifications prove to be ineffective. Is their effectiveness in this region similar to their effectiveness in New England?	3
<b>BIOLOGICAL INFORMATION</b>			
	Analyze harbor porpoise behavior and use of sonar around gillnets (e.g., pingered, not pingered, gear modifications being used) in the Gulf of Maine and/or Mid-Atlantic using underwater video cameras and/or passive acoustics.	Do harbor porpoises depredate or just not "see" nets? Do pingers deter harbor porpoises or alert them to the presence of nets? Are there patterns as to where in the nets porpoises typically become caught?	2
	Conduct research into the visual capacity of harbor porpoises that may be utilized in the development of potential deterrent and exclusion measures.	Developing auditory and/or visual deterrents to gillnet gear may be an effective means for reducing interactions, although these types of studies can take several years to complete. Pingers successfully reduce harbor porpoise interactions with gillnet gear, but how do they work? Do pingers deter harbor porpoises or alert them to the presence of nets? Can other deterrence and exclusion methods be developed that utilize the animals' auditory or visual senses that have equal or greater conservation benefits?	3
	Evaluating changes in distribution of herring resulting from herring fishery (mid-water trawlers) pressure. Analyze the effect this may or may not have on the distribution of harbor porpoises.	Does fishing pressure from vessels targeting herring (main prey species of harbor porpoises) affect the distribution of harbor porpoises?	4