

# US Navy Marine Species Monitoring Program

Intermediate Scientific Objectives	Which components of the conceptual framework does this question address?
#1: Determine what species and populations of marine mammals and ESA-listed species are present in Navy range complexes, testing ranges, and in specific training and testing areas	Occurrence
#2: Estimate the distribution, abundance, and density of marine mammals and ESA-listed species in Navy range complexes, testing ranges, and in specific training and testing areas	Occurrence
#3: Establish the baseline habitat uses, seasonality, and movement patterns of marine mammals and ESA-listed species where Navy training and testing activities occur	Occurrence
#4: Evaluate potential exposure of marine mammals and ESA-listed species to Navy training and testing activities	Exposure
#5: Establish the baseline behavioral patterns (foraging, diving, etc.) of marine mammals where Navy training and testing activities occur	Occurrence, Response
#6: Establish the regional baseline vocalization behavior, including seasonality and acoustic characteristics) of marine mammals where Navy training and testing activities occur	Occurrence, Response
#7: Determine what behaviors can most effectively be assessed for potential response to Navy training and testing activities	Response
#8: Application of passive acoustic tools and techniques for detecting, classifying, locating, and tracking marine mammals <sup>1</sup>	Occurrence, Exposure, Response
#9: Application of analytic methods to evaluate exposure and/or behavioral response of marine mammals to Navy training and testing activities <sup>1</sup>	Exposure, Response
#10: Evaluate acoustic exposure levels associated with behavioral responses of marine mammals to support development and refinement of acoustic risk functions	Exposure, Response
#11: Evaluate behavioral responses of marine mammals exposed to Navy training and testing activities to support PCoD development and application	Response, Consequences
#12: Evaluate trends in distribution and abundance for populations of marine mammals and ESA-listed species that are regularly exposed to Navy training and testing activities	Exposure, Response, Consequences
#13: Leverage existing data with newly developed analysis tools and techniques <sup>1</sup>	Occurrence, Exposure, Response, Consequences

<sup>1</sup> Primary R&D and DemVal investments for tools and techniques supported by ONR/LMR programs