

# OCEAN CONSERVATION RESEARCH



*Science and technology serving the sea*

March 5, 2013

California Coastal Commission  
45 Fremont Ave, Suite 2000  
San Francisco, CA  
94105

Re: Agenda Item F9a  
Consistency Determination CD 008-13  
US Navy - California portion of Hawaii Southern California Training and Testing  
Program (HSTT)

Dear California Coastal Commissioners and Staff,

Thank you for this opportunity to comment on the Staff Recommendations on the US Navy request for a consistency determination for operations on and off the southern coast of our state. We have reviewed the US Navy document titled “Coastal Zone Management Act Consistency Determination for California” Dated January 2013, and the California Coastal Commission (CCC) Staff Recommendations on the same.

We would concur with the staff that because marine mammals in the areas in question have been exposed to sonar technologies for the past 40 years any determination of negligible population impacts is without a meaningful baseline. This position is substantiated by one of the few baseline studies available on the impacts of noise stress-related fecal hormone metabolites (glucocorticoids) in North Atlantic Right whales,<sup>1</sup> where the cessation of shipping noise was strongly correlated to a decrease in serum cortisol levels in the animals. The study suggests that chronic stress in these animals compromises their breeding success and thus their population recovery.

This study only considered the stress impacts of shipping noise – broadband noise which is considered a masking threat and a psychological threat but not a physiological threat. The testing and training activities proposed by the Navy include explosives, underwater communications, multiple vessel maneuvers in tight formations, and an overall increase in vessel traffic. The US Navy HSTT EIS indicates that millions of marine mammals will be harassed, and hundreds will be killed or maimed (over the entire HSTT range). Suggesting, as the Navy does that these added stressors would have “no population-level effects ... as a result of the Proposed Action” is making some very narrow assumptions based on the aforementioned lack of a meaningful baseline. Furthermore, a conclusion as

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<sup>1</sup> Rosalind M. Rolland, Susan E. Parks, Kathleen E. Hunt, Manuel Castellote, Peter J. Corkeron, Douglas P. Nowacek, Samuel K. Wasser and Scott D. Kraus (2012) “Evidence that ship noise increases stress in right whales” Proc. R. Soc. B doi:10.1098/rspb.2011.2429

simplistic as this could only be made looking at each animal as a receiver of signals – merely a “biological unit” in the geographical context of the ocean – completely divorced from considerations or understanding of normal biological and habitat functions within the ocean ecosystem.

While the area of consideration in the determination is applied by-and-large to areas within California State waters, the Coastal Zone Management Act (CZMA) states that California has an economic interest in activities outside of State waters that will have impacts on waters and coastal areas that are within the jurisdiction of the State. Under this rubric California has interest in and thus some jurisdiction over wildlife concerns that are outside of State waters but are very much part of our economy.

From the standpoint of a positive contribution to our economy; the State has an economic interest in the health and welfare of wildlife, including marine mammals, fish, invertebrates, birds, and turtles that feed, procreate, and inhabit California State waters during any part of their natural history. These animals are economic drivers by way of their roles in our fisheries, our tourist industry, and the overall quality of life of those who dwell in California.

In terms of negative impacts to our economy; it is well known that various noises produced by military operations causes stress, can damage, and even kill marine animals. The US Navy request of the National Marine Fisheries Service (NMFS) for “Incidental Harassment Authorization”<sup>2</sup> is a testimony to this. Increased noise in productive fisheries will compromise their productivity. This is the case for fish<sup>3</sup> as well as commercially harvested marine invertebrates.<sup>4</sup> So while the environmental concerns of the US Navy request hinge on adherence to the Marine Mammal Protection Act, their activities will also have untold impacts on California commercial and recreational fisheries.

Additionally the marine mammals that the US Navy is expecting to maim or kill – should they come to shore, will land on California beaches. In the case of the March 2011 mortality and stranding of dolphins that were killed in US Navy timed explosion<sup>5</sup> it was only a relatively small tragedy and went largely unnoticed by the public because three of four carcasses were collected by the Navy. Should a larger tragedy occur, the stranded animals will end up on California shores and become a liability for the State.

Mid-frequency communication sonars increasingly deployed by the Navy comprise a new set of technologies, having been deployed only in the 12-15 few years – concurrent to the dramatic rise in marine mammal strandings coincident with naval exercises. These new

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<sup>2</sup> Request for letters of authorization for the incidental harassment of marine mammals resulting from U.S. Navy training and testing activities in The Hawaii - Southern California training and testing study area

<sup>3</sup> Marta Picciulin, Linda Sebastianutto, Antonio Codarin, Angelo Farina, Enrico A. Ferrero “In situ behavioural responses to boat noise exposure of *Gobius cruentatus* and *Chromis chromis* living in a Marine Protected Area” *Journal of Experimental Marine Biology and Ecology* 386 (2010) 125–132

<sup>4</sup> Matthew A. Wale, Stephen D. Simpson, and Andrew N. Radford “Size-dependent physiological responses of shore crabs to single and repeated playback of ship noise” *Biol. Lett.* 23 April 2013 v9n2

<sup>5</sup> Danil, K. St. Leger, J. A. (2011). Seabird and Dolphin Mortality Associated with Underwater Detonation Exercises. Paper, Vol. 45, No. 6, 89-95.

sonars are not the doleful ranging and navigation sonars of the past; rather they include very loud digital communication sonars with very fast rise times and high crest factors. These are sounds unlike any natural sounds in the ocean, and while we have more to learn about the impacts of these new signals, damage can occur at exposure levels which are significantly lower than the “acceptable exposure levels” proposed by the Navy. For example, in the EIS table 3.4-3 “Non-Impulsive Acoustic Criteria and Thresholds for Predicting Physiological Effects to Marine Mammals Underwater” the onset of temporary threshold shift (TTS) – and consequently the threshold of Level A harassment is 174 dB re:1uPa<sup>2</sup>s, for “low frequency” and “mid frequency” cetaceans. But in the 2002 Bahamas beaked whale stranding incident it was determined that the mid-frequency sonar exposure levels responsible for the stranding was no more than 165 dB re:1uPa<sup>2</sup>s. This would clearly indicate that there is more to exposure impacts than just energy levels.

But even at this elevated TTS “Level B” threshold the Navy expects to expose over 407,000 marine mammals to this level of non-impulsive noise annually<sup>6</sup> some percentage of which will be in California’s coastal and ocean economic zone.

We are respectfully asking that the Commission deny the current consistency determination and ask the Staff to review the impacts of mid-frequency sonar in greater detail, and consider the impacts that the HSTT program will have on California’s larger economic interests with regard to the impacts of that the exercises will have on our commercial and recreational fisheries, our tourist industries, and the quality of life for California’s citizens.

I have attached our comments to the Navy on the HSTT EIS/OEIS submitted for review in July 2012 to further substantiate the environmental concerns expressed in this letter.

Sincerely,

A handwritten signature in black ink that reads "Michael Stocker". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Stocker  
Director

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<sup>6</sup> Hawaii-Southern California Training And Testing Draft EIS/OEIS Table 3.4-13

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July 10, 2012

Naval Facilities Engineering Command, Southwest  
Attention: HSTT EIS/OEIS Project Manager – EV21.CS  
1220 Pacific Highway, Building 1, Floor 3  
San Diego, CA 92132-5190

Naval Facilities Engineering Command, Atlantic  
Attention: Code EV22 (AFTT EIS Project Mangers)  
6506 Hampton Blvd.  
Norfolk, VA 23508-1278

Re: Combined comments on the Draft Environmental Impact Statement/Overseas  
Environmental Impact Statement for:

Hawaii-Southern California Training and Testing (HSTT)

Atlantic Fleet Training and Testing (AFTT)

Cc: Hon. Barbara Boxer, Chair , Senate Comm. On Environment and Public Works  
Hon. Diane Feinstein, Senate Appropriations Committee, Defense.  
Dr. Jane Lubchenco, Under Sec' of Commerce for Oceans and Atmosphere and  
NOAA Administrator.

To Whom It May Concern:

Please include the following comments into the record for both the HSTT DEIS and the  
AFTT DEIS.

In preparing this critique we have had the opportunity to review the comments from our  
colleagues at the Natural Resources Defense Council (NRDC) to both the HSTT and  
AFTT DEIS's. We find them thorough, thoughtful, comprehensive, and complete. Rather  
than overlap their efforts, let it stand that we fully endorse their work on these reviews.

We always appreciate the opportunity to review and comment on proposed activities of  
the US Navy, although we find that the concurrent issuance and simultaneous closure of  
the public comment period for the Hawaii-Southern California Testing and Training  
(HSTT) and the Atlantic Fleet Training and Testing (AFTT) DEIS places a significant –  
and we believe unreasonable burden on the resources of those of us who have made it our  
work to review, comment, and inform the public about how their tax dollars are spent.

As always we have concerns about the impacts of the proposed activities, and in the case of both of the HSTT and AFTT DEIS we are particularly concerned, given that the estimated take numbers are so extremely high.

In reviewing these documents we found that the numbers were high because the drafters of the documents dug deeply into the literature and presented their estimations based on both more thorough as well as more current peer reviewed literature. This is a breath of fresh air from our previous experiences in reviewing US Navy DEIS documents wherein the peer-reviewed papers substantiating the positions in the documents were either outdated, based on questionable premises, and/or the assumptions made about impacts were short-sighted or woefully inadequate.<sup>1</sup>

We congratulated this new candor in the HSTT- DEIS to our community on its original release,<sup>2</sup> figuring that the Nave N-45 Environmental Preparedness Group was coming to terms with the fact that mitigating for bad public opinion was more costly than “doing the right thing.” This was particularly in light of the recent US Navy Public Relations sobriquet of “A force for good.”

That being said, upon deeper review of the documents our concerns are redoubled, because while there is more overall candor in the document, the assumptions that destroying so much marine life for the expediency of the perceived Navy mission is completely unacceptable.

While it may be arguable in the regulatory setting of the Marine Mammal Protection Act that “Level B” behavioral adaptations to proposed activities would be disruptive but recoverable, there is absolutely no justification for biological damage indicated in a “Level A” harassment. Even short-term “recoverable” assaults such as temporary threshold shift (TTS) are barbaric. Asking the National Marine Fisheries Service or the Marine Mammal Commission to issue “Incidental Harassment Authorizations” or “Take Permits” for “Level A” harassment is the apex of institutional hubris. If someone were to apply to the Department of Health and Human Services for a permit to yell in someone else’s ear, or spill spent ordinance in their salad they would be watched cautiously and put on some “security risk list.” So why is the US Navy encouraged to apply for permission to damage animals? It is patently unethical to damage an animal unless you are going to eat it, or it is going to eat you.

We understand the need for a robust military to defend our shores and guard against unlawful international activities on the high seas. We also understand that we do not want to send our military personnel into harm’s way without assuring their utmost safety. But the US military – particularly the Navy – is the most powerful fighting force on the planet, unparalleled by even the combined forces of the next eight global military powers – many of which are current allies.

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<sup>1</sup> See OCR comments to Gulf of Alaska Testing Range [http://ocr.org/pdfs/navy/2010\\_DEIS%20Gulf\\_of\\_Alaska\\_OCR\\_comments.pdf](http://ocr.org/pdfs/navy/2010_DEIS%20Gulf_of_Alaska_OCR_comments.pdf) and this author’s comments on USWTR [http://ocr.org/pdfs/navy/2006\\_mte\\_uswtr\\_comments\\_seaflow.pdf](http://ocr.org/pdfs/navy/2006_mte_uswtr_comments_seaflow.pdf)  
<sup>2</sup> <http://ocean-noise.com/blog/2012/05/a-developing-candor-in-us-navy-public-relations/>

Of course it is always the desire for a military force to be “invincible.” But invincibility should always be framed in the context of the scale of the threats, in the the costs to society, and increasingly in terms of the cost to our global environment. It should also be weighed in terms of the effectiveness and costs of the alternatives. Because in addition to the hefty costs of over-blown military invincibility, the risk is that it easily becomes a rationale for the military action to become the “action of choice,” overshadowing less costly alternatives for conflict resolution such as diplomacy, or social and economic pressures. If there remains the chance that our military personnel will suffer or die in an action, there then remains a high incentive to engage in diplomacy or socio-political actions.

If our military can just “pound our perceived threats into oblivion” it will then fall upon our own citizens to attempt to stop the carnage. This is a very ineffective strategy for democratic engagement because we have repeatedly seen that in the heat of perceived conflict the voices of our citizens fade behind the roar of war. I need not point any further than our reckless engagement with Iraq in 2002 based of false assumptions with the huge collateral costs to our economy and the destabilization of global security as an example.

While we are not military strategists, nor are we privy to the long-term political objectives of our government, we are as citizens qualified to add our philosophical voice to this discussion. This is particularly in light of the fact that we find the assumptions used to justify the continuous expansion of US Navy warfare training ranges throughout US sovereign waters so egregious, short sighted, and reckless as to almost not warrant any further comment, except to say the since the decommissioning of the US Training Range in Vieques, Puerto Rico, that the US Navy has been making the entire US Sovereign waters a “Warfare Training Range.”

The HSTT-DEIS and AFTT-DEIS are further evidence of this relentless expansion and begs philosophical feedback because aside from the scientific candor in estimated take levels, there is an assumption that this is “OK.”

One of the arguments used in the DEIS to justify the high take levels is the comparison implied throughout the entire “Affected Environment” Sections 3 as well as in the executive summaries that commercial fisheries interactions through entanglements and by-catch exact much higher impacts on marine mammals, fish, invertebrates, and turtles than the proposed military actions as to render the military actions insignificant.

This is a hollow argument; while the take numbers may indicate that the military actions are the “lesser of two evils,” it does not justify any of the deliberate carnage of marine life by the Navy.

The determinations of “acceptable” take numbers are predicated on the assumption that given the various population densities of the subject animals, that an “incidental, but not intentional, taking by citizens while engaging in that activity within that region of small numbers of marine mammals of a species or population stock [is allowed] if the

Secretary... finds that the total of such taking during each five-year (or less) period concerned will have a negligible impact on such species or stock.”<sup>3</sup>

This regulatory framework defined in the Marine Mammal Protection Act (MMPA) was modified to accommodate “military readiness activity [with] a determination of “least practicable adverse impact on such species or stock.”<sup>4</sup>

This accommodation is not an exemption or release from the MMPA, rather it is an opportunity to evaluate the proposed actions in the context of “personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.”<sup>5</sup> This clause provides for deeper consideration of the environmental costs of the action with the safety and effectiveness of the desired outcomes in mind.

It is through this that the US Navy’s “Force for Good” could really shine, because the US Navy through its resources and funded studies of ocean physics, chemistry, marine habitat and biology has developed a broad palate to examine the potential impacts of their actions.

This is an opportunity that is not being taken the HSTT and AFTT DEIS’s. While the evaluations reveal a new candor, the proposed alternatives don’t express responsiveness to the estimated impacts. Nor do they reflect anthropogenic impacts that we know about, that are increasingly becoming evident, but are just recently entering into of the literature.

For example: while the synergistic and cumulative impacts of human activities are beginning to make way into the Environmental Impact Statement discussions, so far there is no metric examining the intermediate and long term health effects induced by our ever increasing agonistic activities on marine life. It is quite clear that we are compromising marine habitats through chemical pollution. Animals at the top trophic levels are becoming toxic to the point that a stranded whale or dolphin runs the possibility of being an Environmental Protection Agency-rated “toxic waste site,” and food animals once considered ‘delectable’ are no longer safe for human consumption.

A similar concern lies in the impacts of noise pollution. Even when the impacts are not mortal or “permanent” we are inducing noise-related stress on marine animals<sup>6</sup> that most probably compromises their ability to survive and proliferate.

Much of this is pointed out in the Sections 3 “Affected Environment” and particularly in the Sections 3.4 Marine Mammal sections where the more recent papers on behavioral impacts of noise exposures are sited. It is clear from the more recent work that behavioral impacts occur at much lower levels and at greater distances than what is used as the threshold for MMPA “Level B” exposure.

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<sup>3</sup> Marine Mammal Protection Act, Sec. 101(a)(5)(A)

<sup>4</sup> Ibid. 101(a)(5)(A)(ii)

<sup>5</sup> Ibid.

<sup>6</sup> Rosalind M. Rolland, Susan E. Parks, Kathleen E. Hunt, Manuel Castellote, Peter J. Corkeron, Douglas P. Nowacek, Samuel K. Wasser and Scott D. Kraus (2012) “Evidence that ship noise increases stress in right whales” Proc. R. Soc. B doi:10.1098/rspb.2011.2429

It is clear that we are compromising their habitat, increasing stress levels, displacing them from preferred feeding, social, and breeding areas, and compromising their ability to communicate, navigate, proliferate, and ultimately survive by the short-sighted priorities of our military-industrial and commercial economy.

In this context we should not be doing a comparative analysis on whether fishing, shipping, or Naval warfare training has a greater impact on marine habitat, rather we need to examine how the additional disruptions further compromise an already stressed environment. If more “biological bandwidth” is required to assure our national security and health of our marine food supply, the Navy is in the best place to promote less impactful marine technologies, and enforce regulations that decrease unlawful commercial and industrial impacts on the habitat.

Throughout my 20 year experience of reviewing and critiquing US Navy and other agency Draft Environmental Impact Statements I have taken the allotted public comment period to comb through the proposals, examining the assumptions, deconstructing the models, and evaluating the supporting documentation. Typically I have offered comments on the shortcomings, obfuscations, deceptions, and programmatic deceptions set into the agencies’ responses to their NEPA mandated requirements to explore the environmental impacts of their proposed actions.

This case is different, largely due to the comprehensive and thorough examination of the literature in the two DEIS. While I find it annoying that these were let out concurrently I do appreciate the “candor” of the drafts. What I find extremely troubling is that with all of the facts, models, and assumptions presented in the documents that the Navy is not paying heed to what they have concluded: that millions of marine mammals and countless fish and marine invertebrates will be maimed, poisoned, or killed by the proposed actions. They have not considered that over the intermediate to long term the practices of the US Navy proposed in the HSTT and AFTT DEIS’s will contribute significantly to the collapse of marine ecosystems. And they have not conceded that these environmental compromises will have a significantly deeper negative impact on global security.

In our review of the HSTT and AFTT DEIS we find profound evidence that the economic and environmental costs are excessive, particularly in a time when both the US economy and the ocean environment are under deep duress. We advise that in both the Hawaii-Southern California Training and Testing and the Atlantic Fleet Training and Testing areas that the “No Action” alternative be selected.

Sincerely,

A handwritten signature in black ink that reads "Michael Stocker". The signature is written in a cursive, flowing style with a long horizontal line extending to the right.

Michael Stocker  
Director