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Northwest Straits Commission

October 22, 2008

Carol Bernthal, Superintendent
Olympic Coast National Marine Sanctuary
115 East Railroad Ave.
Port Angeles, WA 98362

Dear Ms. Bernthal:

On behalf of the Olympic Coast National Marine Sanctuary Advisory Council (SAC), I am forwarding to you comments on the U.S. Navy's NAVSEA Keyport Range Complex Extension DEIS (DEIS). These comments were developed by the Navy Keyport DEIS work group that was established by the advisory council to prepare comments. Subsequently, the advisory council discussed and adopted these comments unanimously at an advisory council meeting on October 22, 2008 that was convened for the purpose of considering these comments. The advisory council requests that you forward these comments to the appropriate persons in the U.S. Navy, as indicated in the Federal Register Notice, Vol. 68, No. 168 of September 11, 2008.

Support for "No Action" Alternative

In general, the advisory council does not believe that the Navy makes a compelling case for an expansion of this size, and prefers the No-Action Alternative among the range of alternatives posed by the DEIS. When the Olympic Coast National Marine Sanctuary

(OCNMS) was originally designated, there were activities specific to the Quinault Underwater Training Range (QUTR) as described in the OCNMS 1993 Final Environmental Impact Statement (FEIS) that were exempt from sanctuary regulations. Under the current proposal, roughly one-third of sanctuary waters would be impacted (see DEIS figure 2-6a). The advisory council is concerned that the proposed expansion of the QUTR from the current size of 48.3 nm² to 1,854.6 nm² (Alternative 3) will adversely effect a significantly larger portion of OCNMS waters, with the result that

Artwork: David Sones

additional types of habitats and living marine resources that do not occur in the present, smaller QUTR, would be impacted. Expansion also increases conflicts with present uses of the sanctuary. The advisory council believes that the needs of the Navy and the interests of the public could have been better served if there had been an alternative that included a much smaller QUTR operating area with a potential linked surf zone area.

Surf zone should be located outside OCNMS waters

The advisory council is further concerned about the request for a new surf-zone landing area inside the sanctuary. The activities listed in Table 2-6 in the surf-zone and intertidal areas within the sanctuary are incompatible uses of sanctuary resources. The table indicates that up to 40 unmanned undersea vehicle (UUV) activities are contemplated annually. In addition to impacting surf-zone, intertidal, and subtidal habitats and organisms, it would also impact other human uses of these areas at times when the Navy would deploy UUVs. Other activities intended to occur in the surf zone include inert mine detection, non-Navy testing, acoustic and non-acoustic sensors, and static in-water testing. Therefore, the advisory council prefers the surf-zone be located outside of the sanctuary, as contemplated in Alternative 3. For the reasons stated above, however, the advisory council does not endorse any of alternatives except the No-Action Alternative.

The advisory council finds the DEIS inadequate, as indicated by the following comments.

Resource impacts are inadequately assessed

The National Environmental Policy Act (NEPA) requires an EIS to provide a much more thorough analysis of the risks to each biological and environmental element than is provided in the present document. An EIS must also discuss alternatives and mitigation measures as well for each risk identified if they are critical to the subsequent analysis of potential impacts. The advisory council's understanding of the level of Navy activity is based on descriptions in Table 2-6. Activities beyond those levels would require additional environmental review.

Concerns include:

- Bottom contact activities (test vehicles, etc.) could impact areas of known fragile resources, or impact as-yet-unsurveyed seafloor habitat. Impacts on habitat-forming invertebrates such as deep sea corals are inadequately assessed in the DEIS.
- Increases in toxic substances could have substantial impacts through bioaccumulation. Bioaccumulation of toxics has not been addressed in the DEIS.
- Impacts to marine mammals are not adequately assessed in the DEIS. Citations on the effects of sonar on marine mammals are out-of-date. Proposed mitigation is inadequate.

Planning documents are not sufficient

- Current contingency and response plans for oil spills and hazardous substance releases are inadequate for the outer coast. In order for mitigation measures to be considered and evaluated in the DEIS, spill response plans must be available to the public. Consideration of the impact of spills and plans for mitigation is inadequate in the DEIS.
- Prevention plans for activities in the QUTR and proposed surf zone must be developed to address measures to prevent oil spills and hazardous substance releases.

The advisory council is submitting additional comments on specific issues raised by the DEIS. These compiled in a comment table matrix attached to this letter.

The Council is an advisory body to the Sanctuary Superintendent. The opinions and findings of this letter/publication do not necessarily reflect the position of the OCNMS and the National Oceanic and Atmospheric Administration. Thank you for the opportunity to comment.

Sincerely,



Terrie Klinger, Chair
Olympic Coast National Marine Sanctuary Advisory Council

Attachment:

**OLYMPIC COAST NATIONAL MARINE SANCTUARY ADVISORY
COUNCIL COMMENTS
ON THE DRAFT NAVSEA NUWC KEYPORT RANGE COMPLEX
EXTENSION ENVIRONMENTAL IMPACT STATEMENT/ OVERSEAS
ENVIRONMENTAL IMPACT STATEMENT (DEIS)**

DEIS Page Number	Section Heading	Subject	Comments
1-15	1.3.3.1	Fleet Activities (Excluding RDT&E)	Do the UUV crawlers have potential to break corals or sponges? Was this looked at?
1-19	1.3.3.6	Overview of tests	Is expendable another term for disposable? These targets should be recovered.
1-24			Communications with non military vessels will be greatly enhanced through cooperative relationships with Tribal and non-tribal fisherman prior to the training exercises.
1-27	1.4.2	Public Scoping Process	While this section describes Tribal consultations and Agency briefings and documents the areas of concern, it does not state or reference where the responses to these concerns are in the DEIS.
2-2	2.2.1	Table 2-1	Table 2-1. Fleet activities at NUWC do not include hull-mounted sonars, does that mean all Fleet activities in QUTR do include them, what about Fleet vessels during Deployment Systems operations?
2-27	2.3.2.3	Description of QUTR Site Alternatives and Example Scenario	Figures should also include other pertinent information such as EFH, HAPC, and bathymetry -- this would demonstrate how expanding the area provides benefits to the training.
2-27	2.3.4	Range Operating Policies and Procedures	The statement that "exclusion zones" would be set up to "ensure that there are no marine mammals within a prescribed area prior to commencement of each in-water exercise" is not realistic. Throughout this section while the use of the term "ensure" may be good to indicate operations will be stopped if a cetacean is spotted, it should not imply that such a mitigation strategy can be effective for deep diving cetaceans or operations in poor visibility.
2-27	2.3.4	Range Operating Policies and Procedures	In Table 2.8 the procedure for identifying marine mammals through passive acoustic is not clear since there are serious challenges in identifying or classifying potential marine mammal sounds or determining the range or location of the source of these sounds.
			The exact nature of the sonar operations being used was not always easy to evaluate. For marine mammals, the critical question is if any of the sources were the 53C mid-frequency sonar that has been directly associated with beaked whale strandings. This association and which sound source this is should be clearly stated as well as the changes in use of this specific sonar. A clear statement

DEIS Page Number	Section Heading	Subject	Comments
			would also be helpful whether any proposed use of LFA sonar is anticipated.
3-18 to 3-34	3.2	Marine Flora and Invertebrates	Here there is a statement there are no ESA-listed species or critical habitat. However, this presumes that care standards should not be the same. We want to maintain the current health of these species and there is little discussion as to potential harm to them. We know UUV crawlers are being used and there is no discussion of how their impact if any is assessed. The very fact that all the algae and invertebrates (great numbers of phyla, great species diversity) are being so lumped is indicative of lack of attention on these. Yet they are the food chain for the larger animals given so much attention. Discussion of decapod mechanoreceptors is limited to morphology and not to impact. So no conclusions are drawn. Discussion of cephalopods presumes low impact. We don't see a full discussion that would lead to this conclusion. On page 3-19, discussion of amphipods is mixed into eel grass information. This should not be under "marine flora." Again, we have life cycle information but no discussion of impact, from UUV or other disruption.
3-21	3.2.2.2	Marine Flora and Invertebrates	There are a number of invertebrates listed but no discussion of potential harm to their habitat, other than attempts to reduce spills.
3-23	3.2.2.2	Marine Flora and Invertebrates	The Navy admits that crawlers or anchors or recovery activities could disrupt marine flora, but there is a conclusion that no long-term changes would result. We see no foundation for the conclusion and must take their word. Were there studies? Just below the Navy state benthic invertebrates could be similarly disrupted. Again, we must take on faith that there will be no long-term disruption. If the tests are ongoing, how can we assume this?
3-23	3.2.2.2	Marine Flora and Invertebrates	Spill risk is addressed on the same page. The following raised concern: "loss of non-recovered metallic components were also found to have insignificant effects on water quality due to the absorption of dissolved metals to sediments." This passage belongs under water quality and not under invertebrates and flora. However, on reading the water quality section 3.6, concerns were reduced.
3-32	3.2.4.2	QUTR Alternative 1	Figure 3.2-6 depicts areas of clam harvest and not clam distribution. Clams are present at various locations along the entire figure.
3-30 to 3-34		Marine Flora and Invertebrates	QUTR is discussed at 3-30 and 3-31. Many invertebrates, plankton, and algae described. Again, at 3-33, the assumption is made that impacts from UUVs or recovery activities, anchors, or targets would be short term and not result in long-term changes. We simply don't have points of reference from which to agree or disagree with this statement and therefore it is too pat. An EIS should provide the basis for a conclusion. The timeframe of

DEIS Page Number	Section Heading	Subject	Comments
			disturbance may or may not be the determinative factor. The conclusion that no mitigation is necessary (page 3-34) is not supported by any probative material in the text.
3-38	3.3.4	Sea Turtles	In the discussion regarding sea turtle entanglement, it is mentioned that nylon parachutes are utilized for aircraft launched test items. The Navy should utilize biodegradable materials for the "disposable" parts on test items reducing the risk of entanglement, ingestion, and/or smothering. This could impact other animals in addition to turtles.
	3.5.8	QUTR Site Marine Mammals at the QUTR site	Expansion of QUTR site is not only a major expansion <50 nm ² to 1,804 nm ² but also involves dramatic expansion of habitat types and therefore species of marine mammals likely present. Expansion to waters that include the shelf edge as well as the Quinault and Grays Canyon and offshore waters bring operations into contact with beaked whales, the most sensitive species to mid-frequency sonar.
3-171	3.5.8	QUTR Site Marine Mammals at the QUTR site	The citations used in this marine mammal sections are incomplete and often miss some of the most relevant publications on a topic. Of greatest surprise, the marine mammal section does not reference or use what is the single most relevant study of marine mammals in the proposed QUTR area, a study specifically initiated and funded by the Navy (Oleson et al. 2007a). While this work is ongoing, results acoustic and visual surveys done in proposed region are available in progress reports published by the Navy on the web site of the Naval Postgraduate School.
	3.5.8	QUTR Site Marine Mammals at the QUTR site	Additionally, the most recent publication summarizing the marine mammal results from detailed annual summer surveys of the Olympic Coast Sanctuary conducted over an extended number of years (Calambokidis et al. 2004) is also not used in this section (although it is referenced in Appendix D). http://www.nps.edu/Research/publications/07techrpt.html
	3.5.8	Gray Whales	Gray whales: Gray whales utilize broader habitat with the proposed QUTR site than is indicated here. While gray whales do commonly feed on mysid's in rocky coastal waters, they are also know to feed along the bottom in soft sediments that also occur in the broader proposed QUTR zone. Surveys conducted for the Navy in 2007 revealed areas of concentration of bottom-feeding gray whales in waters up to 10 nmi offshore within the proposed QUTR range. It does not seem appropriate to consider the density of migrating gray whales 0 just because they are migrating through the area. The fact that virtually the entire gray whale population of close to 20,000 has to migrate through the QUTR twice each year is a rather significant presence and makes potential impacts of Navy activities in this zone of some

DEIS Page Number	Section Heading	Subject	Comments
			importance. It appears the density estimates may only reflect the smaller number of seasonal resident animals and exclude the migratory animals which is not appropriate.
	3.5.8	Beaked Whales	Beaked whales: This group of species is a major concern for two reasons: 1) they have been shown to be impacted by Navy activities in other areas, and 2) the expansion of the QUTR range results in Navy operations now being conducted in prime beaked whale habitat. The one statement in the beaked whale section about impacts of anthropogenic sounds is both an extreme understatement and provides a somewhat bizarre and not widely accepted reason for beaked whale sensitivity. The simple point that should be made and which could use many other citations is that it is now widely accepted that beaked whales have stranded and died in many other areas as a result of exposure to mid-frequency Navy sonar. This could cite a review publication like Cox et al. (2006).
	3.5.8	Killer Whales	Killer whales: Surveys sponsored by the sanctuary revealed that all three types of killer whales including both southern and northern residents occur in these waters (Calambokidis et al. 2004).
	3.5.8	Northern Fur Seals	Northern fur seals: As documented in the Olesson et al publication mentioned above, northern fur seals are the most common pinniped seen in offshore waters in the QUTR area.
	3.5.8	Humpback Whales	Humpback whales: This is the most common large whale in the QUTR area and is very commonly seen in the spring, summer, and fall, and occasionally in winter. The clarification of this species in Table 3.5-16 as Uncommon is not appropriate and should be considered Common. For this species the failure to cite or use either the publication from the OCNMS cruises (Calambokidis et al. 2004) or the Navy-sponsored acoustic and visual surveys (Olesson et al. 2007a) is particularly glaring. These studies demonstrate the common occurrence of humpback whales in these waters not just in summer but in all seasons. The conclusion about the specifics of the population structure of humpback whales off Washington is inaccurate. The US/BC border rather than representing the border of a population (even though for US Stock Assessments they may have to be treated that way) is not appropriate and in fact the humpback whales off northern Washington are part of the same feeding aggregation occurring in southern BC. This is part of a relatively small unit numbering just a few hundred animals. There are now new estimates of humpback whale abundance for the entire North Pacific as well as the Washington/S BC feeding areas from the SPLASH humpback whale project (Calambokidis et al. 2008). This study also provides more accurate determination of migratory movements of these animals than had been available previously.

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	3.5.8	Blue Whales	Blue whales: Section on blue whale vocalizations and the function it plays is somewhat out of date. More recent work has shown that it is almost exclusively males that produce the long patterned vocalizations and therefore the function is more related to reproduction (Olesson et al. 2007b, 2007c).
	3.5.8	Fin Whales	Fin whales: It would be appropriate to mention the high mortality of fin whales from ship strikes noted in the Pacific Northwest in recent years (Douglas et al. 2008).
	3.5.8.2	Environmental Consequences	Focus of marine mammals impacts is appropriately on noise exposure, however, the focus on TTS and PTS is not the primary issue. While TTS and PTS are worth considering, the well-documented impacts of mid-frequency sonar on beaked whales occurs at exposure levels way below those that cause even TTS but still result in lethal consequences.
3-41		Bottom-Anchored Targets	Bottom Anchored targets should be removed when no longer necessary, especially those made of plastic components.
3-46	3.4.1	Overview Existing Conditions	Tribal fisheries include commercial fisheries. Throughout the document tribal fisheries are described as "usual and accustomed fisheries", a more correct terminology is that tribes engage in commercial, ceremonial, and subsistence fisheries. These fisheries take place in Usual and Accustomed Fishing Areas (U & A's). U & A's have been determined by treaties and subsequent court decisions.
3-212	3.6.3	QUTR Site	Under the section discussing "tidal currents" which is typically related to local tide cycles. Also in this section there is reference to the Davidson and the California current, this is confusing as these two named currents are the result of larger oceanographic processes. Both currents have seasonal cycles of where they are located in the water column, and vary in direction, speed, and distance from shore.
3-213	3.6.3	QUTR Site	Sediment composition and quality neglects to describe glacial influences in offshore sediment characteristics. Quality is a relative term that needs definition.
3-213	3.6.3	QUTR Site	Water Quality section discusses currents but not water quality parameters: turbidity, oxygen etc...
3-213	3.6.3	QUTR Site	Activities that affect water quality and sediment quality describe dilution as the solution to toxin being released in the environment. This could lead to low level chronic exposure of marine organisms to toxic substances that are released.
3-214	3.6.3	QUTR Site	While cables may become covered with sediment they do not become "part of the substrate".
3-200	3.6	Sediments and Water Quality	At page 200-sediments are evaluated for possible release of hazardous constituents...Studies were done at Dabob Bay by Batelle in 2001, where activities had taken place. Metals studied: Cadmium, Copper, Lithium, Lead, Zinc, and Zirconium. The levels were below non-urban portions of Puget Sound and met state water quality standards.

DEIS Page Number	Section Heading	Subject	Comments
3-202	3.6	Sediments and Water Quality	Washington State has Sediment Management Standards for marine, low salinity, and freshwater surface sediments, and freshwater surface sediments, to eliminate adverse effects on biological resources and human health. The main threat seems to be spills of materials (throughout the chapter), or temporary increases in turbidity in the water column during tests.
3-209 and 3-214	3.6.2 and 3.6.3	Sediments and Water Quality	The biggest concern is found at page 3-209, where heavy metals could leach into sediments and the water column form lead anchors and copper core guidance wires. While most anchors are recovered, some are lost. Lead, copper, cadmium and aluminum can be toxic to marine organisms, the Navy admits. It finds the leaching amount to be insignificant to water quality. However, these could be ingested by marine worms and get into the food chain and bioaccumulate. The risk has not been addressed. No mitigation is planned
3-215	3.6.3	Sediments and Water Quality	At page 3-213, the higher energy of the QUTR site is discussed, and the risk of fuel discharges. At page 3-314 is a very cursory repeat of the risk of metals from expendable materials. Again, only the risk of exceeding the SMS standards is addressed, not the risk of bioaccumulation. So no mitigation is planned.
3-213	3.6.3.1	Sediments and Water Quality	The DEIS says the Oil and Hazardous Substance Release Contingency and Response Plan (NUWC Keyport 2002) will be used to ensure oil and hazardous material spills and accidental discharges are kept to a minimum, however, this plan is designed to respond to a spill, not prevent one. A prevention plan specific to operations in the QUTR should be developed in coordination with the Olympic Coast National Marine Sanctuary to fully plan for spills. It should include specific prevention measures that will be put in place to prevent any oil or hazardous materials from entering the water.
3-213	3.6.3.1	Sediments and Water Quality	The DEIS States occasional accidental discharges of materials (e.g., leak of oils, fuel from test components) do occur within QUTR Site boundaries; however, such discharges are minimal and disperse over large areas due to ocean mixing. This does not adhere to the Navy policy noted below. Navy OPNAVINST 5090.1C Section 12-3.5 states discharge "Includes any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil or an actual or substantial threat of any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil." Section 12-3.31 defines release as "Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing, including an actual or substantial threat of any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing, into the environment, of any hazardous substance (including the abandonment or discarding of

DEIS Page Number	Section Heading	Subject	Comments
			<p>barrels, containers, and other closed receptacles containing any HS or pollutant or contaminant)." Section 12-3.37 defines a Spill to "include both releases of hazardous substances and discharges of oil." OPNAVINST 5090.1C, Section 22-5.3 further states ships "will comply with applicable oil discharge regulations and the operational requirements contained in this chapter. Compliance will ensure that Navy ships operate with due regard to all recognized standards for environmental protection, while not detracting unreasonably from the Navy's mission to protect the national security interests of the United States. ... Commanding officers will make every effort to minimize oil spill risks across all navy operations through application of aggressive spill prevention measures. All ships should strive to continuously reduce oil spills through proper preparation, rigid adherence to published procedures, and application of the full measure of command attention to any operation involving movement of oil and oily waste. Preventing oil spills is one of the Navy's top priorities." Oil spills, hazardous material releases of materials such as Otto II fuel must be handled as a spill, with the appropriate planning and training. Operations in the QUTR must have defined procedures to prevent oil spills of any amount.</p>
3-213	3.6.3.1	Sediments and Water Quality	<p>The COMNAVREG NW Oil and Hazardous Substance Integrated Contingency Plan (CNRNW ICP) includes NUWC Keyport. The ICP is only applicable to incidents that occur within 12 nm of the assigned shorelines and the NRNW area of operations. The QUTR is not included in this area. A separate plan or annex must be developed to include this area.</p>
3-213	3.6.3.1	Sediments and Water Quality	<p>The vast majority of the Navy response assets identified in the CNRNW ICP are located within Puget Sound, not on the outer coast. For this reason, response equipment and personnel would be greatly delayed in the case of a spill in the QUTR area. Resources to respond to a spill or release must be identified, pre-positioned, and training conducted to cover this gap.</p>
3-213	3.6.3.1	Sediments and Water Quality	<p>For a spill, the DEIS states " impacts are minimal because the spills are small, ocean currents dilute hazardous constituent concentrations, and it is extremely unlikely that the same volume of water is affected by more than one occurrence. Even if two accidental discharges were to occur simultaneously, it is unlikely that the two events affect the same volume of water." The CNRNW ICP states environmental sensitivities must be used to determine characterization of a spill. Sensitive areas are one of the factors to be considered for this. The DEIS incorrectly states that impacts are minimal due to the small size and will be diluted, without considering the environmental sensitivities. In addition, the DEIS does not</p>

DEIS Page Number	Section Heading	Subject	Comments
			provide any capacities of oil or hazardous substances that would be involved in the operations which makes it impossible to determine a spill as "small" beforehand.
3-213	3.6.3.3	Sediments and Water Quality	The ICP sets the goal of preventing pollution incidents "through effective planning, training, and operational risk management. The DEIS does not address this goal or propose any additional planning, training, or resource deployment for the operations for QUTR. No mitigation measures are included in the DEIS. The ICP also sets a goal of conducting "thorough contingency planning efforts through a focused program of preparation and cooperation." There are no new efforts identified to address planning for operations in the QUTR.
3-250	3.9.4	QUTR Site	Regulatory setting: Both Olympic National Park and Olympic Coast National Marine Sanctuary while possessing regulatory authorities also have limitations as described in agency documents. The all encompassing statement in this section is misleading. Additionally there are Tribal and State regulatory authorities in these same areas.
3-258	3.10.3	QUTR Site	Tahola is spelled Taholah
3-270	3.11.3	QUTR Site	Tokelad is spelled Tokeland
3-278	3.12.3	QUTR Site	Air discussion fails to discuss sources from China which are documented.
4-2	4.1.2	Geographic Areas for Cumulative Impacts	Cumulative impacts should include Grays Harbor County and Clallam County species, as many mobile species know no boundaries (salmon, whales).
4-6 to 4-8	4.1.4	Cumulative impacts	Under QUTR Site, the deep sea coral study is referenced but nothing is said about impact on these invertebrates. At page 4-7, the section on marine flora and invertebrates, "anthropogenic activities would have negligible cumulative effects on marine flora and invertebrates." Shoreline disturbance is the only harm acknowledged. At page 4-8, it is concluded that there will be no long-term disruption or harm. These are just statements and there are no studies referenced so it is hard to accept them at face value.
4-9	4.1.4	Cumulative impacts	There are statements made that there are no long-term adverse effects and that water quality is meeting standards. Turbidity would settle out. While we can agree that turbidity will settle out, we find no valid discussion of bioaccumulation in the food chain regarding some of the minerals from discarded or lost lead anchors, or the like.

Citations referenced in Advisory Council comments (above) include:

Calambokidis, J., G.H. Steiger, D.K. Ellifrit, B.L. Troutman and C.E. Bowlby. 2004. Distribution and abundance of humpback whales and other marine mammals off the northern Washington coast. Fisheries Bulletin 102(4):563-580.

- Calambokidis, J., E.A. Falcone, T.J. Quinn, A.M. Burdin, P.J. Clapham, J.K.B. Ford, C.M. Gabriele, R. LeDuc, D. Mattila, L. Rojas-Bracho, J.M. Straley, B.L. Taylor, J. Urbán R., D. Weller, B.H. Witteveen, M. Yamaguchi, A. Bendlin, D. Camacho, K. Flynn, A. Havron, J. Huggins, N. Maloney, J. Barlow, and P.R. Wade. 2008. SPLASH: Structure of Populations, Levels of Abundance and Status of Humpback Whales in the North Pacific. Final report for Contract AB133F-03-RP-00078 prepared by Cascadia Research for U.S. Dept of Commerce. May 2008.
- Cox, T.M., T.J. Ragen, A.J. Read, E. Vos, R.W. Baird, K. Balcomb, J. Barlow, J. Caldwell, T. Cranford, L. Crum, A. D'Amico, G. D'Spain, A. Fernández, J. Finneran, R. Gentry, W. Gerth, F. Gulland, J. Hildebrand, D. Houser, T. Hullar, P.D. Jepson, D. Ketten, C.D. MacLeod, P. Miller, S. Moore, D. Mountain, D. Palka, P. Ponganis, S. Rommel, T. Rowles, B. Taylor, P. Tyack, D. Wartzok, R. Gisiner, J. Mead, L. Benner. 2006. Understanding the impacts of anthropogenic sound on beaked whales. *Journal of Cetacean Research and Management* 7:177-187.
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- Jeffries, S., H. Huber, J. Calambokidis and J. Laake. 2003. Trends and status of harbor seals in Washington State: 1978-1999. *Journal of Wildlife Management* 67(1):201-219.
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- Oleson, E.M., J. Calambokidis, J. Barlow, and J. A. Hildebrand. 2007b. Blue whale visual and acoustic encounter rates in the Southern California Bight. *Marine Mammal Science* 23:574-597
- Oleson, E.M., J. Calambokidis, W.C. Burgess, M.A. McDonald, C.A. LeDuc, and J.A. Hildebrand. 2007c. Behavioral context of call production by eastern North Pacific blue whales. *Marine Ecology Progress Series* 330:269-284.