

From: John Calambokidis [mailto:Calambokidis@CascadiaResearch.org]
Sent: Monday, April 19, 1999 5:38 PM
To: 'mdelaplaine@coastal.ca.gov'
Subject: USGS seismic surveys

I wanted to reply to the comments you had sent me by FAX and as forwarded by email through Susan Jordan.

You asked me about my comments about the Navy's detection ability. I cannot comment specifically on their set-up or how effective it is. I doubt there is anyway that it could be as effective as daytime observation. Marine mammals can be difficult to sight even in daylight with good conditions and there is no way to avoid a deterioration of sighting ability with increased wind or waves or decreased visibility due to light or fog and rain. The reference to the Navy using "trainable" spotlights would only be of limited utility, because marine mammals surface for only brief periods and the spotlight only illuminates a small area. Luck would have to be on your side to be pointing the spotlight at the right place at the right time. This was our experience in using a sophisticated Navy thermal scope last year in Puget Sound. It only searched a small viewing area making it difficult to detect most marine mammals. It worked well with hauled out pinnipeds (always present) and I have heard it works well detecting large whale blows at a distance. Catching a marine mammal within 100 m of the boat would be hit or miss.

I am not familiar with the Navy's forward looking sonar (sea bat) but must admit to being somewhat skeptical of the success of that system in detecting marine mammals and accurately differentiating them from debris, fish schools, krill, etc. I personally have not seen reliable success with any such system.

The language from the Navy seemed a little off point where they indicated they "felt comfortable committing to a 100 m daytime and night time A/S/ test monitoring protocol". This does not say what the probability of successfully sighting a marine mammal at night time will be. Similarly, I would think that USGS would have little trouble agreeing to a similar day time and night time protocol. I have just wanted to make sure all party's recognize that there is an unavoidable loss in visibility at night and it makes it correspondingly more difficult to insure that any animals present will be detected.

Best,
John Calambokidis
Research Biologist
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>
>From: Mark Delaplaine <mdelaplaine@coastal.ca.gov>
>To: "'Wan, Sara'" <lwan22350@aol.com>,
 "'Jordan, Susan'" <Susan_Jordan@newscom.com>,
> "'Notthoff, Ann'" <anotthoff@nrdc.org>,
> "'Reynolds, Joel'" <jreynolds@nrdc.org>,
> "'Thayer, Paul'" <thayerp@slc.ca.gov>,
> "'Childs, Jon'" <jchilds@octopus.wr.usgs.gov>
>Cc: Alison Dettmer <adettmer@coastal.ca.gov>,
> John Dixon <jdixon@coastal.ca.gov>
>Subject: FW: USGS Seismic Survey project I am currently reviewing
>Date: Tue, 13 Apr 1999 13:41:35 -0700

>
>Here's what the Navy sent me when I asked them about night lighting, FYI

>
>-----Original Message-----

>From: Rosenberry, Ann E [<mailto:RosenberryAE@efdswnavfac.navy.mil>]
>Sent: Tuesday, April 13, 1999 1:39 PM
>To: 'mdelaplaine@coastal.ca.gov'
>Cc: 'Bruce Reed'
>Subject: RE: USGS Seismic Survey project I am currently reviewing

>
>
>Hello Mark,

>The Advanced Sensor (A/S) Test includes 1 night test and the Advanced
>Lightweight Influence Sweep System (ALISS) will only be operating during
>daylight hours. The A/S torpedo-like underwater tow body is towed by the
>R/V Knorr- a Woods Hole research vessel. There is a picture of the Knorr at
>the following web site:

>
><http://www.marine.who.edu/ships/knorr/knorr.htm>
><<http://www.marine.who.edu/ships/knorr/knorr.htm>>

>
>There is sufficient elevation and lighting on the Knorr to adequately
>monitor for marine mammals w/in 100 m from the vessel based upon deck
>lighting and the capability of 2 "trainable" navigation spot lights. I
>don't have specific manufacturer and model numbers for the spotlights but

>could get more details if you need it. The Master of the Knorr provided the
>information on the vessels lighting capabilities - so I assume it is
>accurate.

>

>The Environmental Assessment for A/S and ALISS identified that the
>monitoring protocol for A/S should cover a distance of 100m. Although not
>emphasized in the EA, the 100 m is a buffered distance since impact
>calculations indicated that 56 m would be the distance at which acoustics
>attenuate to 175 dB re 1 mPa and that the ocular hazard distance is 64.4 m.
>The forward looking sonar (Sea Bat) on the tow vehicle also detects objects
>within a 100m radius of the nose of the vehicle. Based upon the
>parameters described above, the Navy felt comfortable with committing to a
>100 m daytime and night time A/S test monitoring protocol.

>

>I am not familiar with the USGS test vessel or their lighting capabilities
>so I wouldn't know how to compare the 2 situations. I am not sure if I
>answered your question from your e-mail. If I missed the mark, please let
>me know.

>R,

>Ann Rosenberry

>

>

>> -----Original Message-----

>> From: mdelaplaine@coastal.ca.gov [SMTP:mdelaplaine@coastal.ca.gov]

>> Sent: Tuesday, April 13, 1999 12:04 PM

>> To: rosenberryae@efds.w.navy.mil

>> Subject: USGS Seismic Survey project I am currently reviewing

>>

>>USGS proposes night operations and says that they intend to observe a 200 m >>avoidance
radius for mysticetes and 100 m for odontocetes, but they say they >>can only reliably see 20-30 m
at night (according to their observer, John >>Calambokidis). Didn't you say you could see farther
at night (in A/S ALISS >>projects)? They say they have "night-vision equipment" but not infra-red
>>equipment. What does the Navy have? It sounds like similar equipment. Any >>suggestions?

Thanks

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