

Woehr, James R

From: Woehr, James R
Sent: Thursday, July 10, 2008 10:53 AM
To: Valdes, Sally J; Lewandowski, Jill; Cluck, Rodney; Prescott, Joy; Lortie, John; Martin, Paul (Lowell,MA-US); Thomas C. Woodworth (Thomas.Woodworth@mms.gov)
Cc: Bornholdt, Maureen
Subject: Monitoring That Passes External Review of Validity
Attachments: Nichols and Williams monitoring.pdf

Attached is a 2006 publication on monitoring that represents the finest explanation I have yet seen on what meaningful, cost-effective monitoring should look like, as well as a criticism of what typical "omnibus monitoring" is and generally has been.

To design a proper monitoring program will take some time and serious effort, and is beyond our capability with the Cape Wind project. However, it can be reasonably assumed that we will face numerous situations that will require long term monitoring, so it would be judicious of us to start thinking in terms of designing protocols for long term monitoring associated with offshore alternative energy development that will pass the test of scientific validity and external review. If we can get out ahead of this still rather new alternative energy technology wave (sorry, couldn't resist the pun), we could save ourselves a lot of headaches down the road.

The authors of the attached article are veterans of monitoring wars and the development of Adaptive Management. Jim Nichols is with USGS at the Patuxent Wildlife Research Center and has been for nearly 15 years a driving force in the development of advanced monitoring protocols and models that inform the annual waterfowl season regulatory process. Ken Williams is the Chief of the Cooperative Fish and Wildlife Research Unit system at USGS, a longtime proponent of Adaptive Management, a persistent critic of traditional "omnibus monitoring," and is senior author of a 2002 tome on "Analysis and Management of Animal Populations."

Yes, there is a lot of math involved and we will need outside help to develop, evaluate and adaptively modify the mathematical models to find which best predict outcomes in regions under consideration for wind farm siting.

Monitoring can be terribly wasteful if done improperly and without adequate focus, and can leave you vulnerable to criticism of data validity and credibility of conclusions.

This won't be easy, and as I said, it's too late to apply to Cape Wind, but we ought to keep this foremost in mind as we work to develop standard monitoring protocols for offshore energy siting and facilities construction.

Jim Woehr
Avian Biologist
Minerals Management Service
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5/7/2010

Valdes, Sally J

From: George T Allen/AMBS/R9/FWS/DOI@FWS@DOI on behalf of George T Allen/AMBS/R9/FWS/DOI@DOI
Sent: Friday, August 01, 2008 3:32 PM
To: Valdes, Sally J
Cc: Manville, Albert; Robert Blohm/ARW/R9/FWS/DOI@FWS
Subject: Cape Wind Review

Sally,

Thank you for your request that Dr. Al Manville of my staff participate in your review of the Cape Wind Project Bird and Bat Monitoring Plan.

The Service raised significant concerns about the Cape Wind Project in our 21 April 2008 letter to Dr. Rodney Cluck. These issues remain unresolved. We continue to believe that MMS needs to work more closely with us to develop an ESA-listed bird monitoring and reporting plan based on our February 2008 suggestions; prepared a valid pre- and post-construction monitoring protocol; and use acoustic monitoring, thermal imaging, modified radars or other scientific tools that the Service recommended to both the Corps of Engineers and to MMS.

We believe that the Cape Wind review needs to be undertaken in a much more methodical and detailed way, which should include a careful critique of work conducted by COWRIE, DEFRA, and other authorities on offshore wind development. The short turn-around time for review of your monitoring plan will not make this possible, given that no effective techniques for post-construction monitoring exist.

Dr. Manville and other Service staff, including several leads from our New England Region, our Chesapeake Bay Field Office, and leads from the Biological Resources Discipline of USGS are all extremely busy with other tasks related to wind development. Dr. Manville also serves as the Service's technical consultant to the current Windpower Federal Advisory Committee. His work for the Service on that effort takes a considerable portion of his time and, more importantly, is a potential conflict his participation in a review of the Cape Wind plan. Having considered the constraints on the work of your review committee and Dr. Manville's other tasks, I respectfully decline your invitation for his participation in the review.

Regards,

George

George T. Allen, Ph.D., C.W.B.
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Valdes, Sally J

From: Prescott, Joy [joy.prescott@stantec.com]
Sent: Thursday, March 06, 2008 4:36 PM
To: Cluck, Rodney
Cc: Valdes, Sally J; Costa, Jessica; Lenseth, Elizabeth (Lyndhurst,NJ-US); Lewandowski, Jill; Martin, Paul (Lowell,MA-US); Lortie, John
Subject: RE: FW: CW BA tern PVA

Rodney -

To clarify, we didn't feel we could deliver an appropriate product in the timeframe you felt was needed.

I've asked John to follow-up so you understand our capabilities and how we can appropriately assist.

- Joy

Joy Prescott
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-----Original Message-----

From: Cluck, Rodney [mailto:Rodney.E.Cluck@nms.gov]
Sent: Thursday, March 06, 2008 2:19 PM
To: Martin, Paul (Lowell,MA-US); Lewandowski, Jill; Prescott, Joy; Costa, Jessica
Cc: Valdes, Sally J; Lenseth, Elizabeth (Lyndhurst,NJ-US)
Subject: RE: FW: CW BA tern PVA

Stantec is not running the PVA or collision risk because they told us they could not do it. This was both disappointing and surprising to me.

Therefore, Rachael P. is trying to find people to run the models. The last time I spoke with her she did not have any commitments. This is extremely problematic for the timing of our consultation process.

Rodney

Rodney E. Cluck, Ph.D.
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-----Original Message-----

From: Martin, Paul (Lowell,MA-US) [mailto:PMartin@TRCSOLUTIONS.com]

Sent: Thursday, March 06, 2008 1:36 PM

To: Lewandowski, Jill; Prescott, Joy; Costa, Jessica

Cc: Cluck, Rodney; Valdes, Sally J; Lenseh, Elizabeth (Lyndhurst,NJ-US)

Subject: RE: FW: CW BA tern PVA

Jill, in talking over some budget stuff with Craig from CW, he indicated Stantec would not be re-running the PVA or collision risk, and he indicated MMS has concurred with this. So, who is running this and what is the time line to get this revised material to Stantec? I will be at the hearings Mon-Thurs with almost no time to deal with the BA.

For the NOAA stuff you can coordinate with Lisbeth, who has been out this week, but got much of her stuff to me at the end of last week, but I have not incorporated it into a new document yet.

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Woehr, James R

From: Woehr, James R
Sent: Tuesday, July 22, 2008 11:38 AM
To: Lewandowski, Jill
Subject: RE: Cape Wind Avian/Bat Monitoring Plan

Jill,

I really think the aerial surveys using High Definition Cameras are going to change visual monitoring, too. Based on the information I received this morning from Matthew Mellor in the UK, I have converted British Pounds to American dollars and square kilometers to square miles. The result is that such aerial surveys with High Definition cameras will cost from \$10 - \$30 per square mile, depending on the degree of statistical confidence desired. That would equate to \$250 - \$750 to survey an area the size of Cape Wind (25 sq. mi.), or maybe \$1500 for an area twice that size, to include not only the area of the wind energy facility but the surrounding area as well.

The cost of acoustical and high def aerial surveys is quite reasonable, especially in comparison to radar, and the accuracy and precision of these methods will enable valid comparisons between survey times or between sites.

Now if only those microphones could discriminate among the "thuds" made by bird and bat species when they hit a rotor!

We will be able to get good data on bird and bat species presence/absence, flight routes, etc. But we still have the problem of detecting collisions and identifying what just "hit the fan."

Jim

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From: Lewandowski, Jill
Sent: Tuesday, July 22, 2008 11:23 AM
To: Woehr, James R
Subject: RE: Cape Wind Avian/Bat Monitoring Plan

Jim,

Thanks for the summary. I was going to ask about the outcome of that call and it is great to have it in writing! I am always impressed and excited when it comes to acoustic monitoring. This is also becoming a very valuable tool in the marine mammal world.

Jill

From: Woehr, James R

5/7/2010

Woehr, James R

From: Woehr, James R
Sent: Thursday, June 19, 2008 3:54 PM
To: Rodney E. Cluck (Rodney.E.Cluck@mms.gov)
Subject: Key Issues for Discussion at FWS Meeting

Hi Rodney,

Here is a short list of items for consideration at our meeting with the Fish & Wildlife Service on Monday.

Data paucity. There is no denying this. If MMS is going to approve the project by the end of this year, can tradeoffs be made with FWS in exchange for a favorable ruling? Would they settle for some type of mitigation or combination of mitigation/monitoring/research concurrent with project construction and operation? If so, what would that be? Would some kind of habitat improvement/creation that would increase nesting habitat be seen as offsetting any mortality associated with the Cape Wind facility?

Sampling vs total counts. Why is radar and acoustical detection of birds/bats necessarily a 24/7/365 task? That's not how science is ever done. Why can't a sampling scheme be designed that would be far less costly and still scientifically valid?

Limitations of current technology. Some of the missing data FWS bemoans is admittedly (by them) perhaps beyond current technology. Can they therefore commit to accepting "best available scientific methods?"

"Reasonableness" of costs. Acquiring the extensive data set FWS would love to see could be prohibitively costly and possibly make the entire project economically unfeasible. How do they estimate what constitutes a "reasonable" cost? Do any guidelines on this exist? Or can they just set the bar as high as they want without regard to costs?

Value of the facility as a functioning laboratory. A great deal of information can be gained from monitoring/research concurrent with construction/operation/decommissioning of this facility that would be immensely valuable for developing guidelines to site selection in future project applications which are surely coming. Is the value great enough to offset their concerns about possible (but uncertain) negative consequences?

Pre-permitting guidelines development. MMS has learned a lot from this DEIS process on the Cape Wind project and the comments on the DEIS. Would FWS consider it compensatory if MMS agreed to develop guidelines for future wind energy project applications which are acceptable to the bird/bat conservation community yet fall short of being prohibitively costly?

Hope this helps.

Jim

5/7/2010

Woehr, James R

From: Lewandowski, Jill
Sent: Thursday, September 11, 2008 8:16 AM
To: Amaral, Michael; Woehr, James R
Cc: Hecht, Anne; vonOettingen, Susi
Subject: RE: Cape Wind Monitoring Plan

Michael,

We are putting together a CD with all these references and had hoped to get it to you earlier in the week. I will t
you know when it is on its way.

Thanks.
Jill

-----Original Message-----

From: Michael_Amaral@fws.gov [mailto:Michael_Amaral@fws.gov]
Sent: Wednesday, September 10, 2008 9:51 AM
To: Lewandowski, Jill; Woehr, James R
Cc: Hecht, Anne; vonOettingen, Susi
Subject: Fw: Cape Wind Monitoring Plan

Jill and Jim:

Anne Susi and I are beginning to review the draft ABM plan and we noticed that MMS has not sent us key references (despite note of "attached" in at least one case) and per my email request below. Other citations are incomplete, making it difficult for us to conduct independent review. (e.g., Hoppop et al 2006, Tulp 1999, Arnett et al. 2005). If you have these as pdf files, it would expedite our review considerably - thanks.

Michael
Amaral/R5/FWS/DOI

To
09/04/2008 04:02 PM "Lewandowski, Jill"
<Jill.Lewandowski@mms.gov>
cc
"Hecht, Anne" <Anne_Hecht@fws.gov>,
"Obiol, Barry T"
<Barry.Obiol@mms.gov>, "Woehr,
James R" <James.Woehr@mms.gov>,
"Cluck, Rodney"
<Rodney.E.Cluck@mms.gov>, "Valdes,
Sally J" <Sally.Valdes@mms.gov>,
"vonOettingen, Susi"

<Susi_vonOettingen@fws.gov>
Subject
RE: Cape Wind Monitoring Plan
(Document link: Anne Hecht)

Jill : I'll get back to you early next week re the timeline. We're going to discuss with our RO and WO tomorrow. Having someone from our Migr Bird program review the doc from a non-listed bird perspective is a very good idea.

One thing that concerns me is that the time provided for our review and comment on the avian monitoring plan is very short. Given that some of these technologies are so new that they are experimental with little published scientific literature as supporting information, I would ask that MMS provide with the plan, whatever sources of supporting information (as pdf files or website links) that you can, so we do not have to spend time independently locating these sources. Thanks

Michael Amaral, Supervisory Fish and Wildlife Biologist
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"Lewandowski,
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"Amaral, Michael"
<Michael_Amaral@fws.gov>. "Hecht,
Anne" <Anne_Hecht@fws.gov>.
09/03/2008 02:25
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