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MEMORANDUM

To: Elizabeth Murdock, Golden Gate Audubon Society
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Marin Audubon Society
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Mount Diablo Audubon Society
Ohlone Audubon Society
Interested Parties

From: Bill Yeates

Date: January 10, 2007

Re: Responses to Shawn Smallwood's Criticisms of Settlement Agreement

There have been many charges made about the settlement agreement that the Audubon Chapters have just entered into. The settlement agreement is a significant improvement over the existing County permit. We were able to achieve these significant improvements due to the diligence of Elizabeth and Samantha to demand that the agreement utilize the best available science and reliance on the scientists that have worked most closely on this matter. In addition to relying upon Shawn Smallwood and Carl Thelander's report, entitled "Developing Methods to Reduce Bird Mortality in the APWRA," subsequent reports by Smallwood, and Smallwood and Spiegel, Elizabeth and Samantha reached out to Smallwood, Thelander, Grainger Hunt, Sid England, and Pete Bloom. Rarely does a settlement agreement achieve everything that one side wants: Please remember we were not negotiating with ourselves, but rather with the wind power industry. The Settlement Agreement carries forward on the issues that the Audubon Chapters wanted back in September 2005:

- A) Requirement that industry reduces avian mortality at Altamont by 50%;
- B) Enforcement of that requirement through the adoption of adaptive management measures recommended by the Scientific Review Committee, if industry fails to meet the 50% avian mortality reduction;
- C) Acceleration of the removal of high risk (Tier 2) turbines at Altamont;
- D) Removal of additional high risk (Tier 3) wind turbines at Altamont—roughly doubling the number of total high-risk turbines that will be removed; and,
- E) Development of a long-term conservation and protection plan for the birds that looks at the question of re-powering the existing wind turbines at Altamont. The agreement intends to do this with the California Department of Fish and Game and the US Fish and Wildlife Service through a Natural Communities Conservation Plan.

Despite these significant gains, this settlement agreement, and those who worked hard to get changes in the existing operation that industry has resisted for years, is being completely mischaracterized. The following is a point by point response to Shawn Smallwood's recent criticism of the agreement. Smallwood comments are in bold font.

1. According to the original and amended Exhibit G to the BOS resolution of September 22, 2005, the SRC shall investigate, monitor and evaluate the effectiveness of the Avian Wildlife Protection Program & Schedule (AWPPS), as well as recommend adjustments to the design and implementation of alternative strategies. The SRC was to approve the fatality monitoring methods to be used through the life of the permits, and was to approve a number of mitigation measures.

The settlement agreement does not change this arrangement. The SRC is free to recommend and the Board of Supervisors and Planning Director are free to approve.

2. The Agreement, however, sets forth mitigation measures and study design parameters not recommended by the SRC.

It does, because it is a settlement agreement among the Parties to a lawsuit, which includes the Alameda County Board of Supervisors.

3. It also restricts the County from implementing alternative strategies that may be recommended by the SRC, thereby removing the means the SRC would have to implement adaptive management strategies as set forth in the Agreement.

It does not. Here is what the settlement agreement says:

Adaptive management measures will be implemented if a 50% reduction in raptor mortality is not achieved by November 1, 2009.

The SRC will prioritize management measures, including an evaluation of management measures that have not reduced raptor mortality at the expense of energy production, after analyzing field monitoring data. The SRC shall use its best efforts to achieve its prioritization of management efforts by June 1, 2009.

By August 1, 2009, Wind Power Companies and Audubon will propose an adaptive management plan to the SRC/County for review pursuant to Condition 5 of the CUP if a 50% reduction in raptor mortality has not previously been achieved and is not projected to be achieved by November 1, 2009. The adaptive management plan will be designed to achieve a 50% reduction in raptor mortality with the least impact on energy production, and may include the elimination or reduction of seasonal shutdowns. The SRC shall act (pursuant to Condition 5 of the CUPs, as necessary) on the adaptive management plan for the Applicable Turbines by November 1, 2009.

4. The Agreement replaces existing and pending recommendations of the SRC with a plan that may not achieve a 50% reduction in raptor mortality and that may prevent the SRC from measuring the percentage change in mortality with reasonable confidence.

The existing permit does not have a 50% reduction requirement. It is unclear how the settlement agreement prevents the SRC from measuring the change in mortality. See response to criticism #22.

5. The SRC needs to assess whether the proposed mitigation measures can achieve the 50% mortality reduction target, whether the terms and conditions of the agreement enable the SRC and monitoring team to measure a 50% mortality reduction, and whether they will allow the SRC to continue to provide scientific oversight of the mitigation and monitoring plans.

The agreement does not prevent the SRC from undertaking an early assessment of the proposed mitigation measures. Except for the additional half and half seasonal shutdown the other provisions simply accelerate the removal and/or relocation of Tier 2 turbines and add the removal/relocation of Tier 3 turbines identified by Smallwood and Spiegel's June 1, 2005 report on high risk turbines. Furthermore, the settlement agreement envisions SRC involvement in end of year course changes and in developing adaptive management strategies if the 50% goal is not reached.

- 3(b) The Wind Power Companies, Audubon, and the County shall meet and confer at least annually to determine if mutually acceptable mid-course corrections in measures to reduce raptor mortality are appropriate after the SRC evaluates the prior year's monitoring data. Agreed upon mid-course corrections for the Applicable Turbines shall be forwarded to the County for consideration pursuant to Condition 5 of the CUPs if the measures require permit modifications.*
- (c) Adaptive management measures will be implemented if a 50% reduction in raptor mortality is not achieved by November 1, 2009.*
 - (i) The SRC will prioritize management measures, including an evaluation of management measures that have not reduced raptor mortality at the expense of energy production, after analyzing field monitoring data. The SRC shall use its best efforts to achieve its prioritization of management efforts by June 1, 2009.*

6. First, Exhibit G-2 continues to inaccurately state the Tier 1 turbines compose about 2% of the APWRA's wind turbines. The correct value is 1%.

OK, correction noted.

7. Second, under Recital no. 4 of the Agreement, the County states its wish to settle into the agreement with the Parties ... "in order to continue producing wind energy while further reducing raptor mortality in the APWRA." In fact, raptor mortality has not been reduced

in the APWRA since any given date, so the implication of the preceding statement is misleading. The recent WEST, Inc. (2006) report indicated raptor mortality last year equaled raptor mortality estimated during the NREL/CEC studies of 1998 to 2003, despite the winter-time shutdown of wind turbines. Furthermore, after I accounted for the fatality searches at wind turbines while they were shut down during winter, the data collected by WEST, Inc. indicate red-tailed hawk mortality increased 79% and the mortality of the four target species together increased 45% (see attached file). The evidence indicates raptor mortality increased, rather than decreased since the CUPs were approved in September 2005.

Audubon is not satisfied with the existing permit either.

8. Under Term 3(a), the baseline for determining percentage reduction in annual raptor mortality in the APWRA is set at 1,300. In fact, the SRC has not established its baseline for assessing percent mortality reduction, and decided not to do so until scavenger removal rates are better understood. Establishing a baseline of 1,300 at this point in time prevents the SRC from establishing the baseline, and was arbitrarily decided by non-scientists.

The baseline mortality of 1300 for the four raptor species was established by the Smallwood/Thelander August 2004 CEC report entitled, "Developing Methods to Reduce Mortality in the APWRA." When this baseline was proposed for the settlement agreement the Audubon negotiators contacted Shawn Smallwood one of the co-authors of the CEC report as to whether 1300 was the proper baseline, because the CEC report showed the mortality as a range from 881 to 1300. Audubon was told that 1,300 was more appropriate as it included both searcher and scavenger error factors. The settlement agreement contemplates the possibility that a new baseline may be developed:

3(a) (ii) The percentage reduction in raptor mortality shall be determined using field monitoring data collected in accordance with the CUPs and scaling factors for searcher efficiency and scavenging as approved by the Scientific Review Committee ("SRC").

(iii) In the event the above-referenced scaling factors exceed 2.5, the Wind Power Companies, Audubon, and the County along with any other individuals or entities that both the Wind Power Companies, Audubon and the County agree to, shall meet and confer to re-determine a mutually acceptable baseline for determining raptor mortality and/or reduction percentage in raptor mortality that triggers adaptive management measures as specified in section 3(c) of this Agreement.

Paragraph 3(a) (iii) assures Audubon that it will have a say in the development of any new baseline. Audubon has no reason not to rely on the SRC's determination. As the County's technical advisor on this matter the SRC will have to recommend the proposed baseline.

9. Term 3(a)(iii) implies the SRC will have the opportunity to decide on a more appropriate adjustment factor for scavenger removal rate and searcher detection error, but then leaves

the final decision on the adjustment factor to the Parties. As a result, the decision over baseline mortality has been shifted from the SRC to non-scientists.

Actually paragraph 3(a) (ii) leaves the determination of scaling factors to the sole discretion of the SRC. If the SRC's scaling factors exceed 2.5 that simply means that the 1300 baseline mortality for raptors needs to be adjusted. Just as Audubon sought out Smallwood for advice on the baseline set forth in the settlement, Audubon will seek the advice of the SRC in setting any adjusted baseline based on the SRC's revised scaling factors.

10. Term 3(b) replaces the SRC with the Parties in deciding on whether the mitigation measures have been effective and whether adjustments to them should be made. This term changes the role of the SRC from that stated in Exhibit G to merely providing data analysis upon request of the Parties.

This is wrong. Paragraph 3(b) states:

- (b) *The Wind Power Companies, Audubon, and the County shall meet and confer at least annually to determine if mutually acceptable mid-course corrections in measures to reduce raptor mortality are appropriate after the SRC evaluates the prior year's monitoring data. Agreed upon mid-course corrections for the Applicable Turbines shall be forwarded to the County for consideration pursuant to Condition 5 of the CUPs if the measures require permit modifications.*

Paragraph 3(b) allows the industry and Audubon to confer on making any midcourse changes based on SRC mortality data. Even the "parties" midcourse corrections must be submitted to the County and reviewed by the SRC pursuant to Condition 5 of the CUP. There is nothing in the language that prohibits the SRC from making recommendations to the County on changes to the CUPs.

11. Term 4 reduces the County's commitment to winter-time shutdown of existing, non-repowered wind turbines.

Audubon agreed to an additional half and half seasonal shutdown in return for the removal of high risk Tier III turbines that were not included in the existing permit. Like Mr. Smallwood Audubon is concerned about the impacts even re-powered turbines have on species like red-tailed hawks. Based upon the recommendations made in the Smallwood/Thelander Report and in the subsequent Smallwood/Spiegel report of June 1, 2005, regarding high risk turbines, Audubon chose to include the removal of Tier III turbines in response to industry's request to continue an additional half and half seasonal shutdown. The overall burden is still on the industry to attain the 50% reduction in raptor mortality.

12. Additionally, the exemption of up to 900 wind turbines committed to a blade-painting experiment (term 6) will further reduce the extent of the winter-time shutdown.

The selection of the turbines and number of turbines in the blade painting study is left up to the SRC.

13. Contrary to the statements in term 5(a) (i), the SRC should not have to identify 24 turbines presumably unconfirmed by WEST, Inc. 2005. According to Wally Erickson the 24 turbines in question are owned by Northwind Energy, who will not participate with the mitigation program. Therefore, the SRC does not need to identify these turbines, because identifying them is not the issue.

It is Audubon's understanding, based on email exchange between Mr. Erickson and Mr. Smallwood that these wind turbines are in Contra Costa County.

14. Under term 5(a)(i), wind turbines in Tiers 1 and 2 will be shutdown, unless the SRC gives the Companies credit for turbines shut down since May 2002 (see below). However, the SRC has been reevaluating the Tier classification developed by Smallwood and Spiegel (2005c), and recently agreed to allocate two days for Julie Yee to work with me on the data underlying these Tiers. Furthermore, Lee Neher and I just developed a map-based classification of wind turbine threat level that I believe will be superior to the Tier classification. Term 5 will terminate the SRC's analysis of which turbines to shut down to achieve a balance between reducing raptor mortality while minimizing loss of wind power generation.

It is Audubon's understanding based on the existing permit that all Tier 1 turbines have been removed. The settlement agreement merely accelerates the removal of Tier 2 turbines. The negotiators to the settlement agreement were working with the existing permit as approved by the Board of Supervisors.

15. Per term 5(a)(ii), giving credit to the Wind Power Companies for wind turbines removed since May 2002 would cancel term 5(a)(i), which requires permanent shutdown of wind turbines in Tier 1 and Tier 2. The cancellation will extend to the number of turbines credited. The SRC needs to examine whether this measure is consistent with achieving a 50% mortality reduction target. Additionally, the exemption of up to 900 wind turbines committed to a blade-painting experiment (term 6) will further reduce the extent of the permanent shutdowns.

Audubon agrees that the burden is on the wind industry to reach the 50% reduction goal in raptor mortality. The selection of the turbines for the blade-painting experiment is under the control of the SRC.

16. The SRC already decided that leaving derelict towers at the ends of turbine rows was a bad idea, and may have contributed to last year's increase in red-tailed hawk mortality despite the winter-time shutdown of turbines. The SRC already agreed to recommend immediate removal of the derelict end-of-row turbines. Therefore, to see it as an option under term 5(c) is inconsistent with the SRC's assessment to date.

The relevant portion of Paragraph 5 (c) states:

Wind Power Companies shall remove each Applicable Turbine that is subject to a shutdown requirement as specified in this Agreement unless the SRC, on a scientific and technical basis, approves of its continued existence (*e.g.*, end-row turbine that serves as a flight diverter) or renewed operation (*e.g.*, middle of a string with low risk).

Audubon agrees with this and why it supports the SRC making the determination under this provision that leaving derelict turbines at the end of turbine rows is a bad idea.

17. Term 6 sets forth study design that was supposed to be decided by the SRC. The SRC has yet to decide whether blade painting would be implemented as an experiment. It was already established in the 2005 CUPS that blade painting was an option to be considered by the SRC. If the SRC were to decide blade painting was warranted, then the existing CUPS provided us the authority to recommend it. Term 6 of the Agreement provides no more mitigation than was already required, while dictating study design to the SRC.

Audubon does not disagree with this statement. The blade painting study is not intended as mitigation, but instead as an experiment to see if it works. The SRC retains control over the design and implementation of this experiment.

18. Term 6(c) exempts turbines with painted blades from the seasonal shutdown experiment. This exemption raises questions. Would not this exemption require fatality searches at up to 900 turbines (450 in each treatment) in addition to the turbines searched as part of the APWRA-wide monitoring plan? . . . The monitoring team would need additional funds for this level of effort.

Audubon believes the SRC has the authority to require whatever funding from industry is necessary to adequately design and implement the blade painting study industry has proposed. The first sentence of Paragraph 6 states: "Wind Power Companies may participate in a SRC approved study to determine whether blade painting reduces raptor mortality." If an "SRC-approved study" needs additional funds for monitoring, then the SRC should not approve this study without the funding necessary for proper monitoring.

19. Term 6(c) exempts wind turbines committed to the blade painting experiment from permanent shutdowns. Therefore, the Wind Power Companies may very well select all Tier 1 through Tier 3 turbines for incorporation into the blade painting experiment, thereby exempting all of them from being shut down.

Audubon disagrees. First, all Tier 1 turbines should have been removed under the terms of the existing permit. Tier 2 turbines will be removed within 30 days of the effective date of the settlement agreement. The Tier 3 turbines are not located in one area within the APWRA. Furthermore, under the express terms of Paragraph 6(b) the SRC can reject the industry's proposed design by "respond[ing] within 30 days from submittal with changes necessary for approval." Nothing prevents the SRC from excluding Tier 3 turbines from the blade painting study.

20. Terms 6(d)(i-iii) further remove the SRC from the design of the blade painting study.

Paragraph 6(e) makes it clear that the selection of applicable turbines is “subject to an SRC approved BACI design.”

21. Term 11 countermands the existing CUP provisions giving the County authority to modify or add mitigation measures addressed in this Agreement, thereby forfeiting much of the management plan described in the 2005 CUPs. I think this term eliminates the meaning of recommendations made by the SRC with regard to alternative mitigation and monitoring measures. The Wind Power Companies will be able to routinely argue that SRC recommendations violate term 11 of the Agreement.

Audubon believes the language of Paragraph 11 is specific to the terms of the settlement agreement and is intended to protect Audubon’s interest in requiring industry to reach a 50% reduction in raptor mortality. Without this provision Audubon would be concerned that the 50% requirement in the reduction of avian mortality could be modified, if industry fails to reach this goal.

22. Determining whether a 50% reduction target has been achieved will require a sample size large enough to detect a reduction that is greater than the 50% target to the degree that the acceptable precision of the estimate is the difference between the larger reduction target and the 50% target, i.e., the target needs to be 50% + the percentage error in the estimated reduction.

Audubon intended to leave the determination of whether industry reaches the 50% reduction goal to the SRC. How the SRC makes that determination is up to the SRC’s knowledge, expertise, and discretion.

23. As far as I can tell, the wind power companies have not complied with their CUPs because they have not implemented most of the required mitigation measures set forth in September 2005.

Again, Audubon agrees that the existing permit needs to be improved.

Finally Audubon respectfully disagrees with Mr. Smallwood’s summary of the settlement agreement.