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Attorneys for Protestant Friends of Stone Lakes National
 Wildlife Refuge and
 Specially Appearing for Protestant Save Our Sandhill Cranes
 and Environmental Council of Sacramento for
 Purposes of Presenting Part 2 Testimony

BEFORE THE

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

HEARING IN THE MATTER OF
 CALIFORNIA DEPARTMENT OF WATER
 RESOURCES AND UNITED STATES
 BUREAU OF RECLAMATION
 REQUEST FOR A CHANGE IN POINT OF
 DIVERSION FOR CALIFORNIA WATER FIX

**PART 2 SUR-REBUTTAL TESTIMONY OF
 SEAN WIRTH**

SAVE OUR SANDHILL CRANES
(Part 2 Sur-rebuttal)

I. INTRODUCTION

I provided testimony in this Hearing for Save Our Sandhill Cranes' Part 2 Case in Chief (SOSC-6) and Rebuttal (SOSC-80). My Statement of Qualifications ("SOQ") is at SOSC-82. I previously testified as an expert witness in the case-in-chief portion of this hearing. (Hearing Transcript, April 10, 2018, pp. 64:12 – p. 66:24; pp. 112:6 – p. 118:4; SOSC-6, pp. 2:2 – p. 3:8.) This testimony responds to the Administrative Draft Supplemental EIR/EIS ("ADSEIR") and the Part 2 Rebuttal testimony of Dr. Earle (DWR-1219). Additional supporting materials for this testimony are found in the September 17, 2018 Friends of Stone Lakes National Wildlife Refuge comments (SOSC-87) on the Public Review Draft Supplemental EIR circulated by the Department of Water Resources ("DWR") under the California Environmental Quality Act, which had not yet been circulated for review by the Bureau of Reclamation under the National Environmental Policy Act.

II. THE ADSEIR FAILS TO ADDRESS THE SUBSTANTIAL CHANGES IN PROJECT FOOTPRINT

Dr. Earle states that: "Nothing in the June 2018 Administrative Draft Supplemental EIR/EIS changes my opinion from my direct testimony that the CWF is reasonably protective of wildlife and plant species." (DWR-1219, p. 2.) In doing so, Dr. Earle fails to consider the substantial changes in the Project footprint on the landscape. The Project would lie approximately half a mile closer to the Stone Lakes National Wildlife Refuge (SWRCB-113, p. 3-7, Figure 17-1.) This necessarily would bring the Project's impacts closer to the Refuge, thereby increasing its destructive potential. The Project's closer proximity to the Refuge would harm wildlife such as the Greater Sandhill Crane by exposing them to construction noise, air, and visual disturbances. (See SACO-28, pp. 2-4 [Veselka].) Moreover, the footprint change would result in a significant loss of Greater Sandhill Crane roosting habitat. (SWRCB-113, pp. 12-27 to 12-28.) The relocation of the northern shaft (see SWRCB-113, Figure M-3, Sheet 5 and 6) alone would cause significant and different impacts on the Crane population. (See SOSC-80, pp. 13-14, 16-17.) This example demonstrates that same Project changes are

1 arguably more destructive than the original Project, and not “reasonably protective of wildlife
2 and plant species.”

3 Dr. Earle continues: “Since that time, an Addendum has been issued to the FEIR
4 (Exhibit DWR-1295) with the effect of a substantial reduction in the proposed length of new
5 transmission lines; the project changes described in this addendum serve only to further
6 reduce collision risks for birds, and thus, reinforces my prior opinion.” (DWR-1219, p. 15.)
7 There is no clear depiction in a figure or description in the ADSEIR text of this purported
8 reduction in transmission lines. Additionally, familiar deficiencies pervade from the FEIR/S,
9 specifically that there are no studies that accurately predict what the incidence of bird strikes
10 rate would be. This issue, coupled with the wide discrepancy in expectation of the
11 effectiveness of flight diverters and flushed birds hitting lines were not adequately addressed,
12 indicate that the information in the ADSEIR is incomplete.

13 Dr. Earle also claims that “[t]he model could not consider the results of the January
14 2018 CWF Addendum to the FEIR that reduced the proposed new mileage of CWF
15 transmission lines by 19 miles relative to the proposal stated in the FEIR/S. The new design
16 meets transmission line needs through reconstruction of existing lines, making them safer for
17 birds than they are currently.” (DWR-1219, p. 16.) The idea that a reduction in transmission
18 lines, as identified in the ADSEIR, is automatically safer ignores the fact that “no take” of fully
19 protected species is an absolute legal restriction. Theoretically reduced take is still take
20 nonetheless. Even assuming for arguments sake that a reduction in transmission lines is safer
21 for avian species, allowing take does not constitute the reasonable protection of wildlife. As
22 described in my prior testimony, the Project must include the undergrounding of all powerlines.
23 (See SOSC-80, pp. 9-10.)

24 **III. AVOIDANCE AND MINIMIZATION MEASURE 20 IS INEFFECTIVE**

25 Dr. Earle and the ADSEIR both rely heavily on the conclusions of the FEIR/S that the
26 mitigation measures and the avoidance and minimization measures are more than adequate to
27 address the impacts from the project. This was said and relied upon despite the fact that the
28 adequacy of the FEIR/S and DWR’s Project approval is being challenged in court on these

1 same issues. This reasoning is a type of circular logic where the justification used for a new
2 conclusion is as flawed or more flawed than the original conclusion that it is based on, but
3 claims are made anyway that the original conclusions now support the new conclusions. The
4 only way to begin to address this very flawed structure would be to address the original
5 mitigations and avoidance and minimization measures that are still being used in the context of
6 the new and previous impacts. For Greater Sandhill Cranes, that means directly addressing
7 AMM 20 (SWRCB-111, pp. 4-32–4-40; excerpted at FSL-47).

8 **A. Timing of Construction and Noise**

9 The first element of the noise and disturbance avoidance and minimization measures
10 relates to timing and it is supposed to minimize construction during the Crane’s wintering
11 season, but only if it is “practicable in light of project schedule and logistical considerations.”
12 (SWRCB-111, p. 4-32.) As for the loudest construction activities like pile driving “that need to
13 occur for only a limited time,” these activities “should be scheduled outside the crane wintering
14 season to the extent practicable.” (SWRCB-111, p. 4-32.)

15 The conceptual construction schedule provided in the 2018 Conceptual Engineering
16 Report (“2018 CER”) is replete with construction activities during the Crane wintering season.
17 (DWR-1304, 2018 CER, Appendix C [PDF pp. 290-310].) Indeed, many of the measures in
18 AMM 20 would be unnecessary if there was to be no construction during Crane season. (See
19 March 8, 2018 Hearing Transcript, p. 21 [PDF p. 25].)

20 In short, the construction timing language of AMM 20 appears to be a suggestion, and
21 the wording does not actually *require* anything, and all indications are that construction would
22 occur in the months that Greater Sandhill Cranes are present. The exhaustive qualifiers and
23 non-binding language of the noise element of the measure make it aspirational at best. As a
24 result, AMM 20 would be ineffective in addressing impacts on Greater Sandhill Cranes
25 described in the ADSEIR.

26 As a result of Project changes, my concerns have only increased about timing of
27 construction in important Crane wintering areas, especially for the newly re-positioned northern
28 shaft on Staten and the safe haven work areas south of it. (SWRCB-113, Figure M3-4, sheets

1 5 and 6 of 12 [PDF pp. 6-7].) If one were hopeful that there was a greater level of commitment
2 evident in the second measure addressing construction noise, this is quickly quashed by the
3 way that it begins – “To the extent feasible.”

4 So, if the Crane wintering season is not avoided, this measure offers that “construction
5 that cannot be completed prior to the commencement of the wintering season will be started
6 before September 15 or after March 15, such that no new sources of noise or other major
7 disturbances that could affect Cranes will be introduced after the Cranes arrive at their
8 wintering ground.” (SWRCB-111, p. 4-32.) So, if it is feasible, presumably in the same way as
9 the first measure is practicable by taking into account Project schedule and cost and logistical
10 considerations, then construction would be scheduled outside of the Crane wintering season
11 window. But, as we see from the conceptual construction schedule (DWR-1304, 2018 CER,
12 Appendix C) there is already construction planned in the Crane wintering period, despite the
13 first measure discussed in the last paragraph, and there is no actual requirement that no new
14 disturbances occur when the Cranes are here, unless it is feasible. Once again, we are left
15 with non-binding language that is aspirational at best.

16 These two initial measures of AMM 20 do not have any teeth whatsoever, and reliance
17 on them as the stopgap measure to avoid and minimize impacts on Cranes from noise and
18 other construction related disturbance is alarming. There is nothing in these two measures
19 that provides any assurance that the effects on Cranes and other wildlife have been
20 adequately addressed and that there will be no take of Greater Sandhill Crane. The ADSEIR
21 also provides nothing further in that regard.

22 **B. Foraging Habitat**

23 Skipping over the power line measures ineffectiveness already addressed in SOSC-80
24 pp. 2-10, SOSC-21 Errata, pp. 2-4 (Pandolfino), FSL-21 Errata, pp. 4-9 (Ivey), AMM 20 refers
25 to “Effects of Greater Sandhill Crane foraging and Roosting Habitat Resulting from Water
26 Conveyance Features.” (SWRCB - 111, p. 4-34.) The first measure here is also to the extent
27 practicable and relies on water conveyance facility final design to “minimize pile driving and
28 general construction related loss of Greater Sandhill Crane habitat.” Clearly it was not

1 practicable to minimize loss through water conveyance facility design because pile driving was
2 slated in the FEIR/S to be near one of the most geographically constrained roosting and
3 foraging areas for Greater Sandhill Cranes in our region, the North Stone Lakes complex,
4 which I discussed in my Part 2 Case in Chief testimony. (SOSC-6, p. 9.) And the Project
5 proponents apparently felt it was impracticable to minimize loss of foraging when the northern
6 shaft was moved further south on Staten Island, resulting in worsening issues with sight lines
7 for foraging and roosting Cranes, as discussed in my Part 2 Rebuttal testimony. (SOSC 80,
8 pp. 13-15.)

9 The second measure for foraging habitat requires pile driving and general construction
10 noise to be limited from one hour after sunrise to 1 hour before sunset for noises exceeding 50
11 dBA Leq (50 decibels averaged over a one hour period). It goes on to state: "Artificial noise
12 barriers may be installed to decrease noise levels at foraging habitat below 50 dBA Leq." And,
13 it indicates that the visual effects of noise barriers on Sandhill Cranes are unknown, so all the
14 other options to reduce noise will be implemented "before installing noise barriers in close
15 proximity to crane habitat." (SWRCB-111, p. 4-34.) As has been already indicated, there
16 would be construction in the winter and therefore the only remaining measure available to
17 attempt to avoid noise and construction impacts on foraging would be the noise barriers that
18 have not been tested on Greater Sandhill Cranes. And, given the extensive footprint of the
19 Project and the fact that the Greater Sandhill Crane is a "no take" species, there would likely
20 need to be an extraordinary amount of noise barriers to avoid "take" from birds flushing from
21 their forage sites due to construction related disturbance and hitting a power line.

22 The third measure, which provides enhanced foraging as an enticement to keep Cranes
23 in their wintering grounds but not near construction activities, is experimental as was
24 addressed in my initial Part 2 testimony. (SOSC-6, p. 9.) And, even if the measure was
25 successful, it would not remove the potential need to utilize noise barriers near construction
26 and along roadways, both paved and dirt.

1 Considering the AMMs discussed thus far we see that:

2 1) There is no enforceable requirement to avoid construction during the Crane wintering
3 season.

4 2) Construction is already planned during the construction wintering season.

5 3) There is no enforceable requirement to complete construction projects before, or not
6 start new construction during, the Crane wintering season.

7 4) Water conveyance facility design for both the intake near the North Stone Lakes
8 roosting complex and the new placement of the northern shaft on Staten Island indicate
9 that it was not practicable to avoid and minimize impacts to Cranes by way of project
10 design and demonstrates that AMM 20 requirements are not providing much in the way
11 of benefits.

12 5) Pile driving and general construction noise is required to be limited near Crane
13 wintering areas at night for noises exceeding 50 dBA.

14 6) The experimental use of noise barriers will be used as a last option.

15 I should add that limiting construction noise disturbances to daytime hours may help
16 protect roosting at night, but would not prevent disturbances to daytime foraging activity.

17 Enhanced foraging opportunities would hopefully keep Cranes in their wintering grounds and
18 away from the loudest aspects of the construction. This leaves the noise barriers to do the
19 heavy lifting to lessen construction disturbance noise and activity. The experimental noise
20 barriers would need to be used extensively if the “no take” standard is to be achieved for
21 Greater Sandhill Cranes and to keep them from flushing from their foraging grounds and
22 potentially striking power lines. The scale of this experimental noise barrier option would be
23 enormous and extend along both sides of numerous roads and an unprecedented number of
24 construction sites.

25 To get a sense of what wide scale use of noise barriers portends on a landscape scale
26 in the Crane wintering grounds, with Crane season construction, and with winter time
27 construction emergency work or other unplanned work during Crane season, it would be
28 illustrative to consider what such barriers might look like on an example like Staten Island.

1 Using the noise contour map of Staten island (SWRCB 113, APPENDIX 23A, Figure 23A-04
2 [Project Alignment Construction Noise Contour (North)], and partly encircling with noise
3 barriers the noise contours at a close distance to the margin of the safe harbor work areas and
4 other construction sites on the island, and both sides of Staten Island Road, would provide a
5 sense of scale and illustrate some significant problems with this approach.

6 The sight line issue for Cranes, as discussed in my Part 2 Rebuttal testimony (SOSC
7 80, p. 14) would likely make areas near the screened off construction areas unusable for
8 Cranes. The noise contours would appear to extend over about a third of the island, requiring
9 placement of numerous noise barriers across the island. As indicated in AMM 20, the
10 effectiveness of these noise barriers is not known because of visual effects. (SWRCB-111, p.
11 4-35.) A very visual bird like a Greater Sandhill Crane would stay well clear of such visual
12 barriers, potentially as far away as the noise contours would have originally extended. This
13 would likely mean that similar to doing nothing about the noise contours, a very large amount
14 of area would be rendered unusable by Greater Sandhill Cranes on Staten Island. It is clearly
15 unacceptable to allow a large amount of the best habitat for wintering Cranes to be taken out
16 of service. As well, noise barriers on both sides of Staten Island road may cause additional
17 issues beyond those associated with sight lines and could result in “take” from strikes in poor
18 visibility conditions.

19 What this clearly illustrates is the paradoxical nature of using noise barriers for a “no
20 take” species. Because of the inherent risk of flushing birds due to construction related
21 disturbance, it would appear prudent to use the maximum amount of noise barriers where any
22 winter construction is undertaken within the cane wintering area to avoid “take” of the species
23 from flushing related injuries. But the maximum amount of visual barriers would be so
24 extensive that they would potentially create their own hazards for wintering Cranes resulting in
25 “take” of their own. Any effort that went only partway to address the construction disturbance
26 impact would also risk take of Greater Sandhill Cranes.

27 The sheer scale of the Project and the no take status of three avian species results in
28 an absolute (meaning that NO Greater Sandhill Crane, Black Rail, or White-tailed kite could be

1 taken) that would be very hard or impossible to meet. The unenforceability of many of the
2 AMMs and the plan to do winter construction in the Crane's wintering area essentially
3 guarantees that "take" will occur due to construction disturbance. The only absolute way to
4 avoid take during construction would be to do no construction during the Crane wintering
5 season, period. For the northern most shaft on Staten Island, this would mean no work
6 whatsoever on the shaft or in any of the safe haven work areas for the entirety of the Crane
7 wintering season. The same would go for Bouldin Island with the changes proposed in muck
8 storage there. This standard was not met and the ADSEIR continues to rely on AMM 20 and
9 the legally challenged FEIR/S.

10 The roosting measures fall similarly short to those just discussed, as does the Staten
11 Island Performance Standard. (SWRCB-111, pp. 4-35 to 4-38.) As for other important AMM
12 20 measures, my rebuttal testimony laid out the problems with the power line strike AMM's and
13 analysis. (SOSC-80 pp. 2-10.) The ADSEIR follows and uses the same fundamentally flawed
14 AMMs. This is a clear indication that the Project would result in unreasonable impacts to
15 Greater Sandhill Cranes and that the circular logic employed in justifying the impacts and
16 analysis in the ADSEIR using the FEIR/S and the MMRP was flawed.

17 **IV. LESSER SANDHILL CRANES**

18 All of the concerns about impacts and AMMs associated with Greater Sandhill Cranes
19 remain for Lesser Sandhill Cranes. This species use far more of the landscape in its daily
20 activities, more than ten times that utilized by Greater Sandhill Cranes—with home ranges for
21 Greater Sandhill Cranes being 1.9 +/- 0.4 kilometers squared, while for Lesser Sandhill Cranes
22 it was 21.9 +/- 1.9 kilometers squared. (SOSC-19, p. 524.) Though the Lesser Sandhill Cranes
23 would have increased options for foraging given its larger home range, it also would have an
24 increased likelihood of impacts to portions of that home range purely as a factor of the larger
25 size of that home range.

26 **V. NEW IMPACTS ON BOULDIN ISLAND**

27 Under the revised Project, the amount of muck to be stored on Bouldin Island has
28 increased as has the amount of construction related activity. (SWRCB-113, Figure M-3, sheet

1 6.) Bouldin Island is very close to Staten Island and is well within the easy reach of Greater
2 Sandhill Cranes roosting on the island. Greater Sandhill Cranes have been recorded on the
3 island for decades and it is a Crane wintering area. (SOSC-86 [Ivey, et al., 2014] and SOSC-
4 87 [Delta Wetlands Project, Draft Environmental Impact Report/Statement, Analysis of Impacts
5 on the Greater Sandhill Crane].) The huge increase in impacts to this island have the potential
6 to render significant portions of the islands unusable for any wildlife. Relying on AMMs from
7 the FEIR/S, given the dramatic change involved in the impacts on Bouldin Island is inadequate
8 and inaccurate. The ADSEIR fails to analyze the extent of those impacts or the effectiveness
9 of attempts to avoid, minimize or mitigate for them. As a result, wildlife, public trust and other
10 resources are inadequately addressed.

11 **VI. CONCLUSION**

12 The ADSEIR/S is flawed and falls short in explicating the full impacts from the
13 substantial changes that it covers. The continued reliance on a contested and flawed
14 document to explain why the Project does not need to provide any additional analysis of the
15 substantial new impacts runs completely counter to the public trust. AMM20 falls far short of
16 avoiding and minimizing the impacts to Greater Sandhill Cranes. The only guaranteed way to
17 ensure that the impacts to this species from activities contemplated in the ADSEIR/S and the
18 FEIR/S are fully avoided and minimized would be the condition that no construction related
19 disturbances would occur in the Greater Sandhill Crane wintering area. As things stand now,
20 the project would result in completely unacceptable impacts to local and protected wildlife.

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22 Executed on the 21st day of September, 2018, at Sacramento, California.

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25 Sean Wirth
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