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November 28, 2016

Chair Alfredo Pedroza and Members of the Board of Supervisors
County of Napa
1195 3rd Street
Napa, CA 94559

Re: Appeal of Approval of Agricultural Erosion Control Plan No. P11-00205-ECPA and certification of Final Environmental Impact Report under the California Environmental Quality Act for the Walt Ranch Vineyard Conversion Project.

Dear Chair Pedroza and Supervisors:

I write to submit rebuttal letters from Greg Kamman (attached as Exhibit 1) and Gretchen Padgett-Flohr (attached as Exhibit 2) regarding this appeal.

In addition to his other points, the letter from Greg Kamman indicates that, at a minimum, potential effects of project related groundwater pumping on reducing stream flow in Milliken Creek should be included in Mitigation Measure 4.6-4 and the Groundwater Mitigation and Monitoring Plan (GWMMP).

Thank you for your attention to this matter.

Very Truly Yours,



Thomas N. Lippe



November 28, 2016

Tomas Lippe
Law Offices of Thomas N. Lippe APC
201 Mission St., 12th Floor
San Francisco, CA 94105

Subject: Review of County Appeal Hearing Video from November 22, 2016
Walt Ranch Erosion Control Plan (P11-00205-ECPA)

Dear Tom:

I have reviewed the video of the November 22, 2016 appeal hearing and have the following comments pertaining to the rebuttals presented by Mr. Mike Reynolds and Mr. James Bushy.

1. Mr. Bushy stated that drainage facilities were included in runoff modeling. An important variable in the hydrologic modeling performed includes the calculation of the runoff time of concentration (T_c). The NRCS defines T_c as the time required for a particle of water to flow from the hydraulically most distant point on a watershed to the design (outfall) point in question. T_c is a function of length and velocity. The 2013 Riversmith runoff modeling was completed on 12 subdrainage areas that include multiple vineyard blocks and drainage improvements within any given subdrainage. Most of the flow path alignments within the model subdrainages do not travel through vineyards or associated drainage facilities. Instead, virtually all vineyard blocks are located off-line or upgradient of the main flow path. In these instances, the runoff modeling only captures a composite change in HSG associated with incremental changes in in HSG associated with conversion to vineyard. In instances where a vineyard lies within the main modeled subbasin flow path alignment, Riversmith states (page 20, Appendix G to DEIR), *"In two of the watersheds, drainage pipes will be installed that will change the time of concentrations. These are within WS 2 and WS 12 in the Milliken watershed. The drainage pipes have the effect of reducing the total time of concentration as well as the lag time in these two cases."*

The Riversmith modeling was done at a scale that computes the peak runoff rates at the outfalls of the twelve subdrainages where they exit the project property boundary. This approach masks potential impacts that occur on a smaller vineyard block scale within the project area for several reasons. First, impacts associated with changes in runoff are not restricted the point where it exits the project site. Increased project runoff within small internal vineyard-scale subdrainage areas are potentially relatively large and can lead to increased erosion. Stated another way, the project-induced change in composite runoff curve number for the modeled subdrainage areas is small when accounting for the relatively small proportion of vineyard blocks that occur in a relatively large unchanged subdrainage area. For example, when increasing the curve number in Block 22 as part of the supplemental hydrology analysis, there was no change in the computed curve number in the modeled

subdrainage “at a level significant figures used in the model” (Riversmith, July 7 2016 letter report). In comparison, the composite model curve number and relative peak runoff changes would be significantly larger for a smaller subdrainage area that includes only a single vineyard. Secondly, the Riversmith runoff model does not include physical representations and simulated hydraulic flow through pipes, ditches or other drainage elements.

The Riversmith modeling approach (both in the DEIR and as reported in Riversmith’s July 1, 2016 letter report) does not integrate structural drainage elements or quantify the impacts of increased runoff and erosion at the outfall points from drainages discharging off of individual vineyards. As presented in my November 18, 2016 letter to you, more detailed modeling of watersheds upstream of vineyard drainage outfalls can result in notable increases in runoff attributable solely to engineered drainage elements. Mr. Bushy states in his rebuttal that in response to increased runoff rates modeled in a single vineyard block, they have reduced the size of the vineyard from 3.4-acres to less than 1.0-acre as well as reducing the overall drainage pipe length in the vineyard. I commend this change and given this example, the County consultants should evaluate and quantify peak runoff rates from all vineyard drainage outfalls and make similar mitigations/redesign if elevated runoff rates were found to be higher than pre-project conditions, if not already completed.

2. Mr. Reynolds indicates that the County consultants have used “the most conservative model” of groundwater recharge (i.e., 7% of mean annual rainfall) when estimating the total available recharge to the Sonoma Volcanic aquifers underlying the project site. He presents and discusses other higher recharge estimates (e.g., 10% of mean annual rainfall) in order to alleviate concern about the close balance between project and cumulative water demands and available recharge. Regardless, the use of the 7% figure was their choosing and serves as the basis of their CEQA analyses. It is also important to clarify that I have presented and substantiated even more “conservative” annual recharge estimates that are significantly lower (2% to 4%) than the representative value used in the EIR in my November 20, 2014 and April 2, 2016 letters. The County has chosen to dismiss my estimates even though the actual or range of deep groundwater recharge rates have not been well studied or measured specifically for the Sonoma Volcanics aquifers.
3. Mr. Reynolds dismisses a potential hydraulic connection between Milliken Creek and underlying aquifers because the creek goes dry in the summer. I don’t disagree with the observation that the creek goes dry in summer nor does it surprise me. Based on my field experience and observations, many reaches of volcanic bedrock hillside creeks dry-down during the summer. But, there is a tremendous amount of information that is lacking in making the blanket conclusion that there is no hydraulic connection between groundwater and surface water. For example: do all portions of the creek go dry?; where did he or others observe it going dry on the Project or adjacent properties?; does it go dry through the Circle S Vineyard property?; how long does it stay dry? From an ecological perspective, an intermittent creek provides considerable seasonal habitat to aquatic organisms and vegetation. Based on the review of April 2009 groundwater data and project groundwater level contours presented in the DEIR, it appears that there are places where the water table intersects the creek channel west of the Project property. If the project water development lowers the water table, this could alter the duration and volume of groundwater discharge to

Milliken Creek, potentially impacting water availability to aquatic organisms with life stages that rely on creek flow during wet and transitional (wet to dry) season periods.

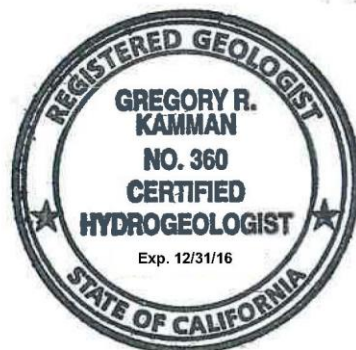
The groundwater-surface water interaction concerns are very similar to the potential impacts associated with the radius of influence and potential well interference between project and adjacent wells. Because of the stated uncertainties in quantifying potential well pumping impacts to groundwater resources in the Sonoma Volcanics, the project has developed a Groundwater Monitoring and Mitigation Plan (GWMMP). Just as groundwater pumping can potentially impact surrounding wells, it can also impact contributions to surrounding creeks and springs, even when those contributions are seasonal/intermittent. Yet, potential impacts to ecological conditions, based on these same hydrogeologic principles have not been studied or acknowledged with respect to Milliken Creek or surrounding springs. The project has set a precedent in developing a GWMMP because of the uncertainties articulated and acknowledged in the EIR in identifying and quantifying potential significant impacts to groundwater resources in Sonoma Volcanic aquifers. The same level of concern for potential significant impacts should be given to the ecological habitats of Milliken Creek and tributaries, especially since there is scant information or study pertaining to surface water-groundwater interactions within the Project influence. Therefore, I recommend that the GWMMP be expanded to include the monitoring and mitigation for potential groundwater pumping induced impacts to surrounding surface water resources and associated ecological habitats. This monitoring effort would require a more comprehensive (spatial and temporal) characterization of existing hydrologic conditions associated with flows in Milliken Creek, it's tributaries and surrounding springs along with an assessment of associated ecological habitat conditions. This type of characterization would require monitoring flows at representative creek reaches (e.g., alluvial, bedrock, etc.) within the area of project influence both on- and off-site throughout a full year to better understand and quantify the likely seasonal contributions from groundwater inputs. The installation of shallow groundwater level piezometers at selected reaches would also assist in understanding the seasonal linkage between creek flow and groundwater. Post-project monitoring would be completed at a frequency similar to existing GWMMP well monitoring recommendations with review of monitoring data by a County hydrology-representative. Similar to identifying potential impacts on surrounding wells, threshold criteria or triggers would need to be established to identify when a potential impact is occurring to surface waters along with recommended mitigation measures, many similar to those identified if surrounding wells are impacted.

Please feel free to contact me with any questions regarding the material and conclusions contained in this letter report.

Sincerely,



Greg Kamman, PG, CHG
Principal Hydrologist



Project: FEIR Walt Ranch, Napa County, California

TO Mr. Thomas N. Lippe
LIPPE, GAFFNEY, AND WAGNER LLP
329 Bryant Street, Suite 3D
San Francisco, California 94107

November 28, 2016

RE: Rebuttal – Hearing Presentation prepared for Walt Ranch, Napa County, California

Dear Mr. Lippe,

A review of the Presentation prepared by the consultant for Walt Ranch states that "Extensive surveys were undertaken over many years by qualified biologists to establish the presence and habitats of the species in question." The key issue here is the qualifications of the biologists. My research into this issue relative to the biologists who provided data early in this process for the development of Walt Ranch has shown that the biologists conducting the California red-legged frog (*Rana draytonii*) surveys were clearly not qualified and I have addressed this in previous letters and comments.

I have now found a report buried on the county website, that is the sum total of the survey work conducted for western pond turtle (*Actinemys marmorata*). As I mentioned in my previous comments to the DEIR and other documents, the entirety of both watersheds on Walt Ranch would be western pond turtle habitat. There are multiple records of WPT in the CNDDDB in both drainages. In addition, 1,300 feet on both sides of all waterways is potential nesting and foraging habitat. No methods were provided in the DEIR or FEIR as to how AES decided that "prime" habitat consisted of so little acreage and where they thought it was located.

The report I located recently is apparently AES's basis for their determination. The report is only three pages long and no actual data were provided in the report; however, the report does name the biologist who did surveys for two days only at select locations. These locations are not identified, nor is the process by which these areas were selected were identified.

What is glaring however, is the lack of qualifications of the biologist, Ms. Kenna Lehman, who provided the information that AES then used to discount most of the watershed lands as essential western pond turtle habitat. She has no expertise as a herpetologist and no training on the species. So this "biologist" graduated from college in 2008. She worked as a roof helper and then as a biologist for one year at AES from 2008-2009. She is currently assisting with research on hyenas. Her specialties are listed as: Radio telemetry, green house husbandry, experimental design, research and source referencing, database management, behavioral observations, acoustic analysis, raptor husbandry and rehabilitation.

I am attaching a screenshot of Ms. Lehman's LinkedIn page and you can clearly read these details on her linked-in page.

I have still found no data relative to foothill yellow-legged frog at all. This underscores my previous points- the biological work was inadequate and conducted by unqualified individuals.

Signed,

**EXHIBIT 2**

Dr. Gretchen E. Padgett-Flohr, Herpetologist and *Certified Wildlife Biologist*

Peer Reviewed Publications

- Wilcox, J.T., **G.E. Padgett-Flohr**, J.A. Alvarez, and J.R. Johnson. 2015. Possible Phenotypic Influence of Superinvasive Alleles on Larval California Tiger Salamanders (*Ambystoma californiense*). *American Midland Naturalist* 173(1):168-175.
- Brem, F.M.R., M.J. Parris, and **G.E. Padgett-Flohr**. 2013. Re-Isolating *Batrachochytrium dendrobatidis* from an Amphibian Host Increases Pathogenicity in a Subsequent Exposure. *PLoS One* 8(5): e61260. DOI: 10.1371/journal.pone.0061260.
- Alvarez, J.A., M.A. Shea, J.T. Wilcox, M.L. Allaback, S.M. Foster, **G.E. Padgett-Flohr**, and J.L. Haire. 2013. Sympatry in California tiger salamander and California red-legged frog breeding habitat within their overlapping range. *California Fish and Game* 99(1): 42-48.
- Conlon, J.M., L. K. Reinert, M. Mechkarska, M. Prajeep, M. A. Meetani, L. Coquet, T. Jouenne, M.P. Hayes, **G. Padgett-Flohr**, and L. A. Rollins-Smith. 2013. Evaluation of the skin peptide defenses of the Oregon spotted frog *Rana pretiosa* against infection by the chytrid fungus *Batrachochytrium dendrobatidis*. *Chemical Ecology* 39: 797–805. DOI 10.1007/s10886-013-0294-z.
- Padgett-Flohr, G.E.** and M.P. Hayes. 2011. Assessment of the Vulnerability of the Oregon spotted frog (*Rana pretiosa*) to the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*). *Herpetological Conservation and Biology* 6(2): 99-106.
- Conlon, J.M., M. Mechkarska, E. Ahmed, L. Coquet, T. Jouenne, J. Leprince, H. Vaudry, M. P. Hayes, **G. Padgett-Flohr**. 2011. Host defense peptides in skin secretions of the Oregon spotted frog *Rana pretiosa*: implications for species resistance to chytridiomycosis. *Developmental and Comparative Immunology* 35: 644-649.
- Bowerman, J., C. Rombough, S. Petrakis, and **G.E. Padgett-Flohr**. 2011. Terbinafine hydrochloride as a treatment for *Batrachochytrium dendrobatidis* infection. *Journal of Herpetological Medicine and Surgery*, 20(1): 24-28.
- Padgett-Flohr, G.E.** and R.L. Hopkins, II. 2010. Landscape epidemiology of *Batrachochytrium dendrobatidis* in Central California. *Ecography*, 33: 1-10.
- Hayes, M.P., C.J. Rombough, **G.E. Padgett-Flohr**, L.A. Hallock, J.E. Johnson, R.S. Wagner, and J.D. Engler. 2009. Detection of *Batrachochytrium dendrobatidis* in a wild population of *Rana pretiosa*. *Northwestern Naturalist*, 90: 148-151.
- Padgett-Flohr, G.E.** and R.L. Hopkins, II. 2009. *Batrachochytrium dendrobatidis*: A Novel Pathogen Approaching Endemism in Central California. *Diseases of Aquatic Organisms*, 83(1): 1-9.
- Kolby, J.E., **G.E. Padgett-Flohr**, and R. Field. 2009. Amphibian Chytrid Fungus (*Batrachochytrium dendrobatidis*) in Cusuco National Park, Honduras. *Diseases of Aquatic Organisms* Special Issue 4:pp3; DOI: 10-3354/dao02055.
- Kolby, J.E. and **G.E. Padgett-Flohr**. 2009. Amphibian Chytrid Fungus (*Batrachochytrium dendrobatidis*) in Honduras: Historical Exposure in *Plectrohyla dasypus* and Subsequent Decline. *Herpetological Review*, 40(3): 307-308.
- Padgett-Flohr, G.E.** 2008. Pathogenicity of *Batrachochytrium dendrobatidis* in two threatened California amphibians: *Rana draytonii* and *Ambystoma californiense*. *Herpetological Conservation and Biology* 3(2): 182-191.
- Padgett-Flohr, G.E.** and M.E. Goble. 2007. Evaluation of Tadpole Mouthparts Depigmentation as a Diagnostic Test for Infection by *Batrachochytrium dendrobatidis* for Four California Anurans. *Journal of Wildlife Diseases*, 43(4): 600-699.
- Padgett-Flohr, G.E.** and J.E. Longcore. 2007. Detection of *Batrachochytrium dendrobatidis* in a wild population of *Taricha torosa*. *Herpetological Review*, 38(2): 176-177.

- Padgett-Flohr, G.E.** 2007. Chytridiomycosis: An Informational Brochure for the Field Biologist. Peer-reviewed by Rick Speare, Lee Berger and Joyce Longcore. Used in workshops on sensitive amphibians; distributed amongst the agencies for internal use.
- Padgett-Flohr, G.E.,** T. Bommarito, and D. Sparling. 2007. Amphibian Chytridiomycosis in Commercially Purchased Research Amphibians. *Herpetological Review*, 38(4): 390-393.
- Padgett-Flohr, G.E.** 2006. A Field Biologist's Guide to Amphibian Diseases. Chapter in: Guide to Amphibians and Reptiles of San Diego County. U.C Press, Berkeley, CA.
- Padgett-Flohr, G.E.** and J.E. Longcore. 2005. Detection of *Batrachochytrium dendrobatidis* in a wild population of *Ambystoma californiense*. *Herpetological Review*, 36(1): 50-51.
- Padgett-Flohr, G.E.** and L. Isakson. 2003. A Random Sampling of Salt Marsh Harvest Mice in a Muted Tidal Marsh. *Journal of Wildlife Management*, 67(3): 646-653.
- Padgett-Flohr, G.E.** and M.R. Jennings. 2002. An economical safe house for small mammals in pitfall traps. *California Fish and Game*, 87(2): 72-7.
- Padgett-Flohr, G.E.** 2002. Survey Protocol for Salt Marsh Harvest Mice and Other Small Mammals. For: P.R. Olofson (ed). Baylands Ecosystem Species Protocols for Key Plants, Fish and Wildlife. San Francisco Bay Area Wetland Goals Project, San Francisco Bay Regional Water Quality Control Board, Oakland, California.
- Padgett-Flohr, G.E.** and M.R. Jennings. 2002. Survey Protocol for California Red-legged Frog, *Rana aurora draytonii*. For: P. R. Olofson (ed). Baylands Ecosystem Species Protocols for Key Plants, Fish and Wildlife. San Francisco Bay Area Wetland Goals Project, San Francisco Bay Regional Water Quality Control Board, Oakland, California.
- Padgett-Flohr, G.E.** and J.D. Reeve. *In prep.* Modeling pathogen geo-diffusion for *Batrachochytrium dendrobatidis* in Central California.

